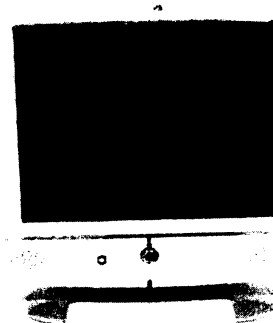


Service
Service
Service



Smart Interface/PnP/Sliding Height Adjustment
High Bright Picture/Auto Picture Adjustment/Wide Viewing Angle



180MT10P/00C
(HIT panel)

Service Manual

TABLE OF CONTENTS

Horizontal frequencies
30 - 80 kHz

Description	Page	Description	Page
Important Safety Notice.....	2	Repair tips.....	38
Technical Data	3	Colour Adjustment.....	39-44
TV control.....	4-6	Block Diagram and control pannel(C.B.A).....	45
TV OSD menus.....	7-10	Scaler board C.B.A.....	46-47
Connection to PC.....	11-12	Conjunction diagram (C.B.A) and Phone Jack	
Description of Controls.....	13-14	PCB C.B.A.....	48
Clock & Phase Adjustments.....	15	Sound Diagram(C.B.A).....	49
OSD Control Structure.....	16-19	Video Decoder Diagram.....	50
Definition of Pixel Defects.....	20	MCU Schematic Diagram.....	51
Wiring Diagram.....	21	Scaler Diagram.....	52
Mechanical Instructions.....	22-24	Video I/O Schematic Diagram.....	53
Electrical Instructions.....	25-27	Inverter Diagram and Layout Drawings.....	54
Factory Adjustment.....	28	Exploded View.....	55
Safety Test Requirements.....	29	Recommended Parts List.....	56
DDC Instructions.....	30-34	Spare Parts List.....	57-60
DDC Data.....	35	General Product Specification.....	61-96
Serial number modification- EEPROM(OSD)....	36-37	General Trouble Shooting Guide.....	97-115

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING.

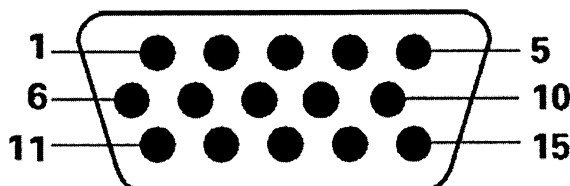
REFER TO BACK COVER FOR IMPORTANT SAFETY GUIDELINES

Technical Specifications

LCD Panel	: TFT LCD
Screen type	: 18.1 " visual
Screen dimensions	: 0.2805 x 0.2805 mm
Pixel pitch	: 1280 x 1024 pixels
LCD Panel type	: R.G.B. Vertical stripe Anti-glare polarizer
Effective viewing area	: (H)359.0 x (V)287.2 mm
Display Colors	: 8 bits interface (16.7M colors)
SCANNING	
Horizontal scan range	: 30 kHz to 80 kHz
Vertical scan range	: 56 Hz to 75 Hz
Video	
Video dot rate	: 135MHz
input impedance	
-Video	: 75 ohms
-Sync	: 2 KOhm
Input signal levels	: 700m Vpp
Synchronization input signals	: Separate sync composite sync
Sync polarities	: Positive and negative
Input Frequency	
SXGA	: 64-80 KHz,Vsync 60-75 Hz(N.I.)
XGA Hsync	: 48-61 KHz,Vsync 60-75Hz(N.I.)
SVGA Hsync	: 35-50 KHz,Vsync 56-75Hz(N.I.)
VGA Hsync	: 31-38 KHz,Vsync 60-75Hz(N.I.)
Video interface	: D-Sub,S-Video,TV-RF, SCART or composite and components video
AUDIO	
Input Level for PC/SVHS/SCART	: 500mV nominal
Headphone out signal level	: 4mW max.
Loudspeaker	: 5 W Stereo Audio(2.5W/chanel RMS x2,200Hz~10KHz,4ohm,10%THD)
OPTICAL CHARACTERISTICS	
Contrast ratio	: 300:1 (typ.)
Brightness	: 300 cd/m2(typ.)
Peak contrast angle	: 6 o'clock
White Chromacity	: x:0.281 y : 0.311 (at 9300° K) x:0.312 y : 0.338 (at 6500° K)
Viewing angle (C/R>=10)	: Upper>=85° (typ.)Lower>=85° (type) Left and Right >=85° (typ.)
Response time	: <= 30ms(typ.)
Resolution and Preset Modes	
Maximum	: 1024 x 1024 at 75Hz
Recommended	: 1024 x 1024 at 60Hz
Physical Characteristics	
Dimensions(WxHxD)	: 452 x 452 x 200 mm (incl. Pedestal)
Weight (monitor only)	: 6.3 kg
Tilt (Forward/Backward)	: -0° / 20°
Power supply	: 100 - 240 VAC, 50/60Hz
Power consumption	: 68 W (typ.)
Temperature (operating)	: 5 C to 35 C
Relative Humidity	: 20% to 80%
System MTBF	: 50K Hrs

Pin Assignment

- The 15-pin D-sub connector (male) of the signal cable



Pin No.	Assignment	Pin No.	Assignment
1	Red video input	9	DDC+5V
2	Green video input	10	Logic ground
3	Blue video input	11	Identical output connected to pin 10
4	Identical output connected to pin 10	12	Serial data line (SDA)
5	Cable detect	13	H. Sync / H+V
6	Red video ground	14	V. Sync
7	Green video ground	15	Data clock line (SCL)
8	Blue video ground		

Automatic Power Saving

If you have VESA's DPMS compliance display card or software installed in your PC, the monitor can automatically reduce power consumption when power saving function active. And if an input from keyboard, mouse or other input devices is detected, the monitor will automatically "wake up". The following table shows the power consumption and signaling of this automatic power saving feature :

Power Management Definition					
VESA's mode	VIDEO	H-SYNC	V-SYNC	POWER USED	LED COLOR
ON	Active	Yes	Yes	68W(typ.)	Green
Stand-by	Blanked	No	Yes	< 2 W	Blinking Green
Suspend	Blanked	Yes	No	< 2 W	Blinking Green
OFF	Blanked	No	No	< 2 W	Blinking Green

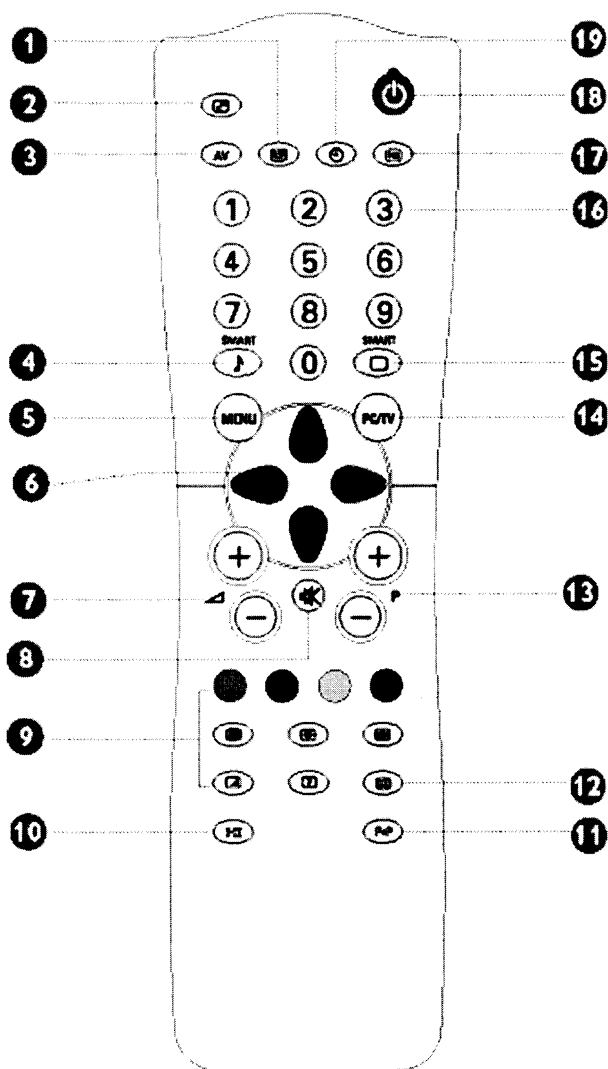
This monitor is ENERGY STAR® compliant. As an ENERGY STAR® Partner, PHILIPS has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

17 Factory preset mode:

Mode	Resolution	H. freq. / V. freq	Standard
1.	640 x 350	31.469KHz/70.087Hz	VGA
2.	720 x 400	31.469KHz/70.087Hz	VGA
3.	640 x 480	31.469KHz/59.940Hz	VGA
4.	640 x 480	35.000KHz/66.667Hz	Macintosh
5.	640 x 480	37.861KHz/72.809Hz	VESA
6.	640 x 480	37.500KHz/75.000Hz	VESA
7.	800 x 600	35.156KHz/56.250Hz	VESA
8.	800 x 600	37.879KHz/60.317Hz	VESA
9.	800 x 600	48.077KHz/72.188Hz	VESA
10.	800 x 600	46.875KHz/75.000Hz	VESA
11.	832 x 624	49.700KHz/75.000Hz	Macintosh
12.	1024 x 768	48.363KHz/60.004Hz	VESA
13.	1024 x 768	56.476KHz/70.069Hz	VESA
14.	1024 x 768	60.023KHz/75.029Hz	VESA
15.	1152 x 870	68.7KHz/75.029Hz	VESA
16.	1280 x 1024	64.0KHz/60.0Hz	VESA
17.	1280 x 1024	80.0KHz/75.029Hz	VESA

Go to cover page

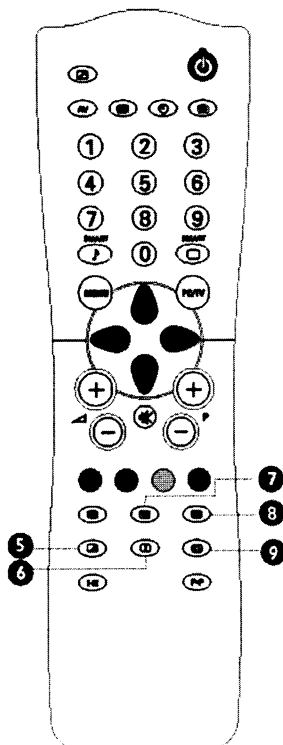
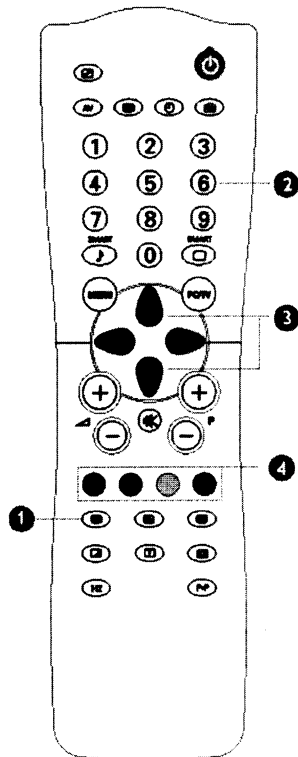
Use your remote controller



- 1 PIP Shift
- 2 PIP On/Off, Size
- 3 AV source
- 4 Smart sound controls To access a series of settings: VOICE, MUSIC, THEATRE and return to PERSONAL
- 5 Menu To display or exit from the menus
- 6 Cursor These 4 keys are used to move within the menus
- 7 Volume To adjust the sound level
- 8 Mute To disable or enable the sound
- 9 Teletext features
- 10 Sound mode To switch from STEREO to MONO or to choose between Dual I and Dual II for bilingual transmissions. For TV sets fitted with NICAM reception, depending on the transmission, you can switch from CAMSTEREO to MONO or choose between NICAM DUAL I, NICAM DUAL II and MONO. When the sound mode is switched to MONO, the indication is displayed in red.
- 11 Previous programme To access the previously viewed programme.
- 12 Screen information To display/remove the programme number, the name (if it exists), the time, the sound mode and the time remaining on the timer. Hold down for 5 seconds to permanently display the programme number on the screen. The volume level and the smart control adjustments are then displayed each time they are used.
- 13 Selecting TV programmes To move up or down a programme. The number, (the name) and the sound mode are displayed for a few seconds. For some TV programmes the title of the programme appears at the bottom of the screen.
- 14 PC/TV mode selection
- 15 Smart picture controls To access a series of settings: RICH, NATURAL, SOFT, MULTIMEDIA and return to PERSONAL.
- 16 Numerical keys For direct access to programmes. For a 2 digit programme number, the 2nd digit must be entered before the dash disappears.
- 17 Program List
- 18 Standby To set the TV to standby mode. To switch the TV set on again, press -, +, or any digit between 0 and 9.
- 19 Sleep timer To select the length of time before the set automatically switches to standby (from 0 to 240 minutes)

Using the Teletext (for areas where teletext service is available)

Teletext is an information system broadcast by certain TV channels which can be consulted in the same way as a newspaper. It also provides subtitles for the hard of hearing or people who are unfamiliar with the broadcast language (cable TV network, satellite channels, etc.).



Press button **Result on Screen**
Display or exit teletext. The main index page presents a list of subjects to which you have access. Each subject has a corresponding page number (always 3 digits).



Note: If selected TV channel does not broadcast teletext, P100 is displayed and the screen remains black. Exit teletext mode and choose another TV channel.

1 On/Off teletext

2 Selecting a teletext page

① ② ③
④ ⑤ ⑥
⑦ ⑧ ⑨
⑩

Key in the required teletext page (3 digits). The page number is displayed at the top left hand corner of the screen. When the teletext page is located, the counter stops searching. If the counter keeps searching, it means that the page is not available for selection. If you make a mistake in keying the page number, you have to complete keying the 3-digit number before re-keying the correct page number.

3 Accessing a teletext page



Press the CURSOR UP button to display the previous page and the CURSOR DOWN button to display the next page.

4 Direct Access to an item or corresponding pages



The 4-colour buttons allow you to access directly an item or corresponding pages.

5 Mix



Allows you to superimpose the teletext page over the TV programme. Press the button the second time to return to teletext page only.

6 Reveal/ Conceal



Press the button once to reveal hidden information (solutions to puzzles, riddles, etc.). Press the button the second time to conceal Information.

7 Enlarge



Press the button once to enlarge and view the top half of the page. Press the button the second time to enlarge and view the bottom half of the page. Press the button the third time to return to normal size page.

8 Hold



A selected page sometimes contains a few sub-pages. The sub-page will automatically move to the next sub-page after about 20 seconds. The total number of sub-pages are indicated at the top right hand corner of the screen. Press the button once to hold page and the second time to release holding of page.

9 Main Index

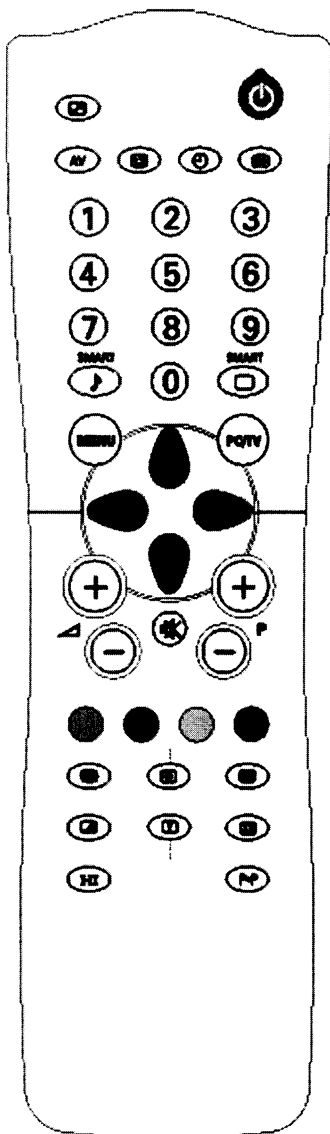


Press the button to return to the main index (generally on page 100).

◀◀ Go to cover page

Using the Programme Listing

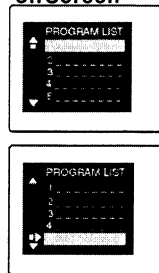
Programme listing feature allows you to navigate through a list of installed programmes for a quick overview of the channels installed on your television



Press buttonResult

1. Display the list of installed programmes. The current channel is highlighted.
2. Cycle through the programme list and highlight the channel number you want to view.
3. Activate the channel you have selected.
4. Exit menu from screen or wait for the menu to time out and disappear from screen.

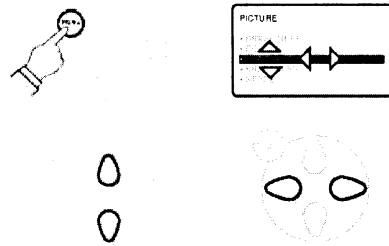
on Screen



TV OSD Menus

180MT10P LMT 7
Go to cover page

Using other menu (With remote controller)



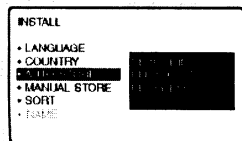
Choosing a language and country



1. Press the MENU key to display the main menu.
2. Select INSTALL (), then press (). The INSTALL menu appears. The LANGUAGE option is activated.
3. Press () to go into the LANGUAGE menu.
4. Select your language with the () keys.
The menu will appear in the chosen language.
5. Press () to exit the LANGUAGE menu.
6. Select the option COUNTRY and press ().
7. Select your country with () keys.
If your country does not appear in the list, select OTHER.
8. Press () to exit the COUNTRY menu.
9. To exit from the menus, press ().

Automatic tuning

This menu allows you to automatically search for all the programmes available in your region (or on your cable network).



1. First carry out operations 1 to 8 above, then:
2. Press () once to select AUTO STORE then press (). The search begins. After several minutes, the INSTALL menu Reappears Automatically.
3. If the transmitter or the cable network broadcasts the automatic sort signal, the programmes will be correctly numbered.
4. If not, the programmes found will be numbered in descending order starting at 99, 98, 97, etc.
Use the SORT menu to renumber them. Some transmitters or cable networks broadcast their own sort parameters (region, languages, etc.). Where this is the case, make your choice using the () keys And confirm with (). To exit or interrupt the search, press the MENU key.
5. To exit from the menus, press ().

Manual tuning



This menu allows you to store the programmes one by one.

1. Press MENU.
2. Select INSTALL (), then press (). The INSTALL menu appears.
3. Select MANUAL STORE () then press (). The menu appears:
4. Press () to go to the SYSTEM menu. Use () to choose EUROPE (automatic detection*) or manual detection with WEST EUR (standard BG reception), EAST EUR (standard DK Reception), UK (standard I reception) or France (standards LL'). Then press () to exit from the menu.
* Except for France (standard LL'): select the option FRANCE.
5. Select SEARCH and press ().
The search begins. As soon as a programme is found, the search will stop. If you know the frequency of the programme required, enter its number directly using the 0, 9 keys and go to step 7.
6. If reception is un-satisfactory, select FINE TUNE and hold down () or () key.
7. Select PROG. NO (programme number) and use the () or 0 to 9 keys to enter the desired number.
8. Select STORE and press (). The message STORED appears. The programme is stored.
9. Repeat steps 5 to 8 for each programme to be stored.
To exit: press the () key.

8 180MT10P LMT

Go to cover page

TV OSD menus

Sorting programmes

1. Press MENU key. The main menu is displayed.
2. Select INSTALL (), then press (). The INSTALL menu appears.



3. Using the () key, select SORT then press (). The SORT menu appears. The FROM option is activated.
- Note: this menu works as follows: Change "FROM" (enter the current programme number), "TO" (enter the new Number), "EXCHANGE numbers" (the operation is carried out).
4. Select the programme you wish to renumber using () Keys or 0 to 9.

Example: to renumber programme 78 as 2 press 7,8.

5. Select TO (using () key) and enter the new number with () Keys or 0 to 9 (for the example given, enter 2).
6. Select EXCHANGE (() key) and press ().
The message EXCHANGED appears, the exchange takes place. In our example, programme 78 is renumbered as 2 (and programme 2 as 78).
7. Select the option FROM (() key) and repeat stages 4 to 6 as many times as there are programmes to renumber.
8. To exit from the menus, press ().

Programme name

You may, if you wish, give a name to the first 40 programmes (from 1 to 40).

1. Press MENU.
2. Select INSTALL (), then press (). The INSTALL menu appears.
3. Press () 5 items to select NAME (concealed at the bottom of the screen,) then () press (). The menu Appears:



4. Select the programme you wish to name using the keys 0, 9 Or - P +.

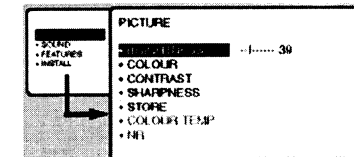
Note: at the time of installation, the programmes are automatically named when the identification signal is transmitted.

5. Use the keys () to move within the name display area (5 characters).

6. Use () keys to choose the characters.
7. Press MENU when the name has been entered.
The programme name is stored.
8. Repeat steps 4 to 7 for each programme to be Named.
9. To exit from the menus, press ().

Adjusting the picture

1. Press MENU then (). The PICTURE menu Appears:



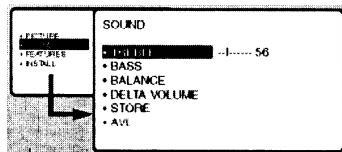
2. Use () keys to select a setting and () keys to Adjust.
Note: the menu is a scroll-down menu.
Keep the key () held down to access the settings hidden at the bottom of the screen.
3. Once the necessary adjustments have been made, select the option STORE and press () to store them.
4. To exit from the menus, press ().

Description of the settings:

BRIGHTNESS: alters the brightness of the image.
COLOUR: alters the colour intensity.
CONTRAST: alters the variation between light and dark tones.
SHARPNESS: alters the crispness of the image.
STORE: stores the picture settings.
COLOUR TEMP (colour temperature): adjusts the colour temperature of the picture. Three options are available here: COOL (blue white), NORMAL (balanced) or WARM (red white). NR (Noise Reduction): alleviates fuzziness (snowy picture). This setting is useful when reception is Difficult.
ACTIVE CONTROL (only available on certain versions): optimizes the quality of the picture according to the quality of reception. This adjustment is in the OPTIONS menu.

Adjusting the sound

1. Press MENU, select the SOUND option () and press . The SOUND menu appears:



2. Use keys to select a setting and keys to Adjust.

Note: to access the AVL setting (hidden at the bottom of the screen) hold down key.

3. Once the necessary adjustments have been made, Select the option STORE and press to store them.

4. To exit from the menus, press .

Description of the settings:

TREBLE: alters the level of the high frequency sound.

BASS: alters the level of the low frequency sound.

BALANCE: to balance the sound between the left and right speakers.

DELTA VOLUME (volume difference): allows you to compensate for the volume differences between the different programmes or the EXT sockets. This setting is available for programmes 1- 40 and the EXT Sockets.

STORE: stores the sound settings.

AVL (Automatic Volume Leveller): automatic volume control used to avoid sudden increases in volume, particularly when changing programmes or during Advertisements.

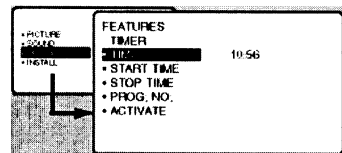
Timer function

This menu allows you to use your TV as an alarm Clock.

1. Press MENU.

2. Select FEATURES (), and press twice.

The TIMER menu appears:



3. Press to enter and exit the sub-menus and use Keys to adjust:

4. TIME: enter current time. Note: the time is updated automatically each time the set is switched on using teletext information taken from programme 1. If programme 1 does not have teletext, the update will not take place.

5. START TIME: enter the start time.

6. STOP TIME: enter the stop time.

7. PROG. NO.: enter the number of the programme Required.

8. ACTIVATE: you can set the alarm to be activated: ONCE ONLY for a one-off alarm, DAILY for a daily alarm or STOP to cancel.

9. Press to set the TV to standby. It will automatically switch on at the time programmed. If you leave the TV switched on, it will only change programme at the time indicated.

The combination of the CHILD LOCK and TIMER functions may be used to limit the length of time your television is in use, for example, by your children.

Locking the set

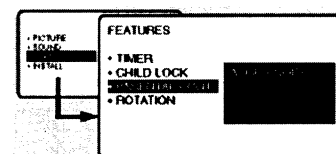
You can bar access to certain programmes or completely lock the set by locking the keys.

Locking programmes

1. Press MENU.

2. Select FEATURES () and press .

3. Select PARENTAL. CONT. () and press .



4. Enter your confidential access code. The first time, enter the code 0711 then confirm by re-entering 0711. The menu appears.

5. Press to go into the menu.

6. Use keys to select the required programme and confirm With . The symbol is displayed alongside the programmes or sockets that have been locked.

7. Press to exit.

To watch a programme which has been locked you will now need to enter the confidential code; otherwise the screen will remain blank. The INSTALL menu access is also locked.

Caution: in the case of encrypted programmes which use an external decoder, it is necessary to lock the corresponding EXT socket.

To unlock all programmes

Repeat stages 1 to 4 above, then select CLEAR ALL and press .

To change the confidential code

Repeat stages 1 to 4 above, then:

5. Select CHANGE CODE and enter your own 4-digit Number.

6. Confirm by entering it again. Your new code will be stored.

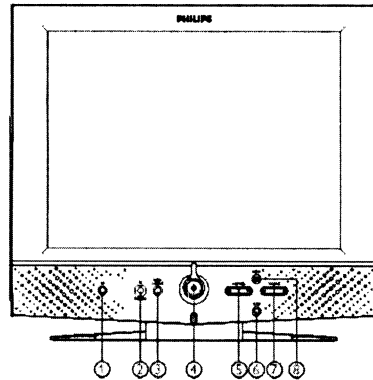
7. Press to exit from the menus.

If you have forgotten your confidential code, enter the universal code 0711 twice.

Description of Controls

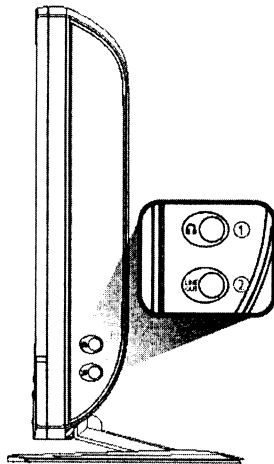
180MT10P LMT 13
 Go to cover page

Front View Product Description

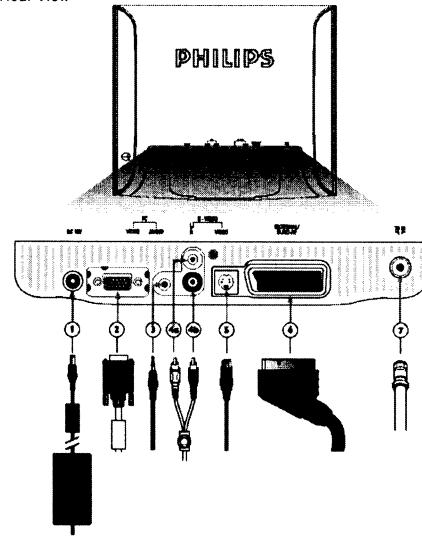


- 1 PIP Activate PIP (Picture in Picture) window and select size
- 2 PC<->TV/Video Switch the monitor between PC mode and TV/Video mode
- 3 VIDEO SOURCE TV/Video source selection
- 4 Power switch On/Off
- 5 Increase or decrease the channel number Or up or down the highlighted function in OSD
- 6 AUTO Automatically adjust the H/V position, phase and clock Setting
- 7 + - Increase or decrease the level of audio volume Or decrease or increase the highlighted function in OSD
- 8 MENU OK Open the OSD and select the highlighted function

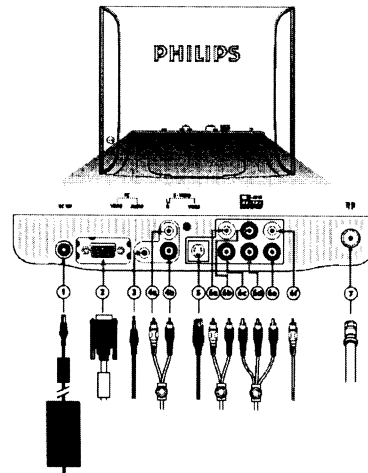
Side View



Rear View



- (Europe)
- 1. DC 12VDC 12V power in
 - 2. PC - Video D-Sub input
 - 3. PC - Audio PC Stereo input
 - 4. S-VIDEO (L) AV audio (L)
 - 5. S-VIDEO (R) AV audio (R)
 - 6. S-VIDEO S-VIDEO in
 - 6. EXTERNAL/EURO-AV SCART connection (for Europe only)
 - 7. 75Ω TV Antenna or CATV cable in



14 180MT10P LMT
 Go to cover page

Description of Controls

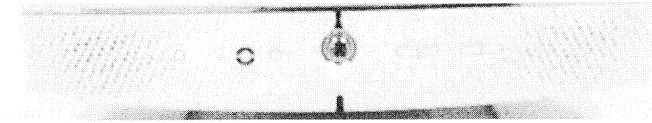
(North America and Asia Pacific)

- 1. DC 12VDC 12V power in
- 2. PC - Video D-Sub input
- 3. PC - Audio PC Stereo input
- 4. S-VIDEO (L) AV audio (L)
- 5. S-VIDEO (R) AV audio (R)
- 5. S-VIDEO S-VIDEO in
- 6. L R - AV IN
- 6a Audio (L) in
- Y-Pb-Pr
- 6b Audio (R) in
- Component
- 6c CVBS in
- 6d, e, f Component video in
- 7.75 Ω TV Antenna or CATV cable in

Optimizing Performance

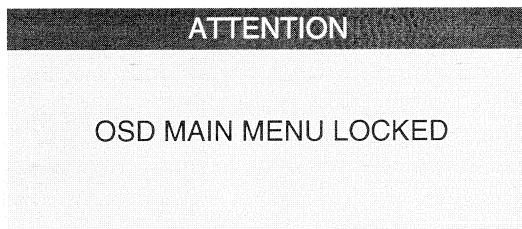
For best performance, ensure that your display settings are set at 1024x768 @ 60Hz (for 15") or 1280x1024, 60Hz (for 18").

Front control panel

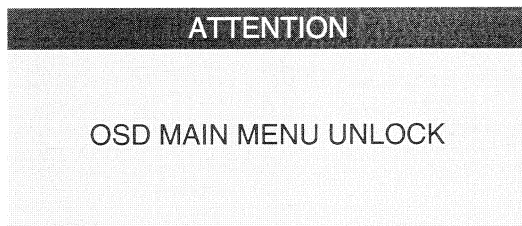


To Lock/Unlock OSD function

The OSD function can be locked by pressing **OK** button for more than 10 seconds, the screen shows following windows for 3 seconds. Everytime when you press **OK** Or **AUTO** button, this message Appears On the screen automatically. The **▲** & **▼** (CHANNEL) , **+** & **-** (VOLUME) hotkey are still functional for CHANNEL and VOLUME expectively while OSD locked



Locked OSD function can be released by pressing **OK** button for more than 10 seconds. While press **OK** button for OSD unlocked purpose, the screen will keep showing OSD MAIN MENU LOCKED until OSD function unlocked and screen automatically shows following window for 3 seconds.



Switch ON/OFF attention signals

All attention signals can be switched off by keep pressing **AUTO** button for more than 10seconds if there is no video signal supplied.

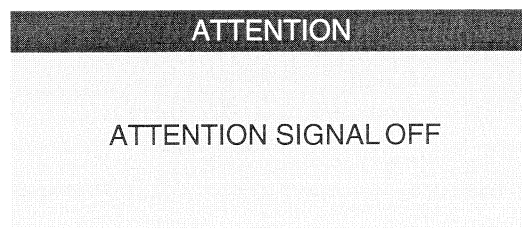
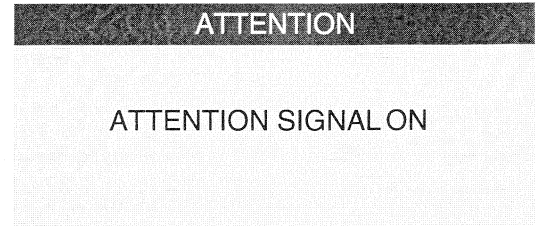


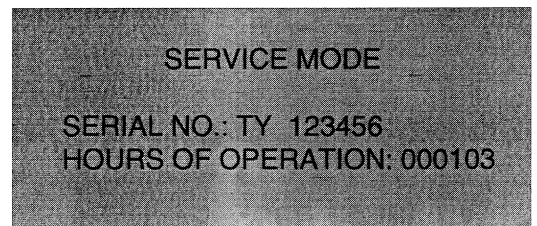
Fig. 2

Recover attention signals by pressing **AUTO** button for more than 10 seconds without video signal input.



Access Service Mode

Operating monitor with no signals (power saving mode), keep pressing **OK** button for more than 10seconds. Following information will appear on the screen. Leave service mode by either re-feed video signal or simply turn off and on the power of monitor.



Access Factory Mode

To hold **OK** And **AUTO** buttons then power on the monitor. Press **OK** to bring up OSD menu for confirmation as below:



In the factory mode, once video signal removed, a full white pattern will be display on the screen as Fig.1 in stead of power saving mode. In other words, the powersaving function will be disable in the factory mode.

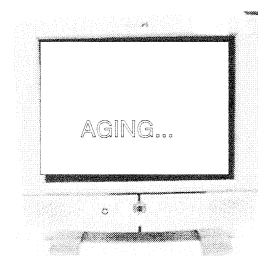


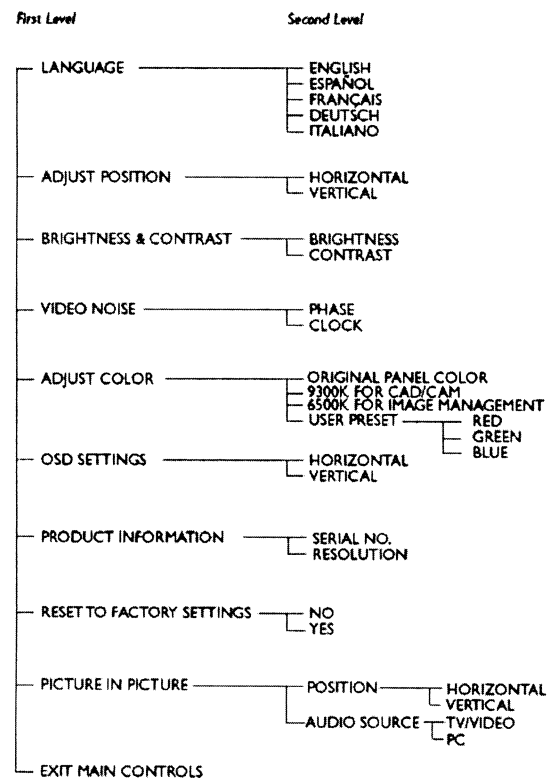
Fig.1

The OSD Tree

Below is an overall view of the structure of the On-Screen Display. You can use this as reference when you want to later on work your way around the different adjustments.

- In PC Mode:

In PC mode

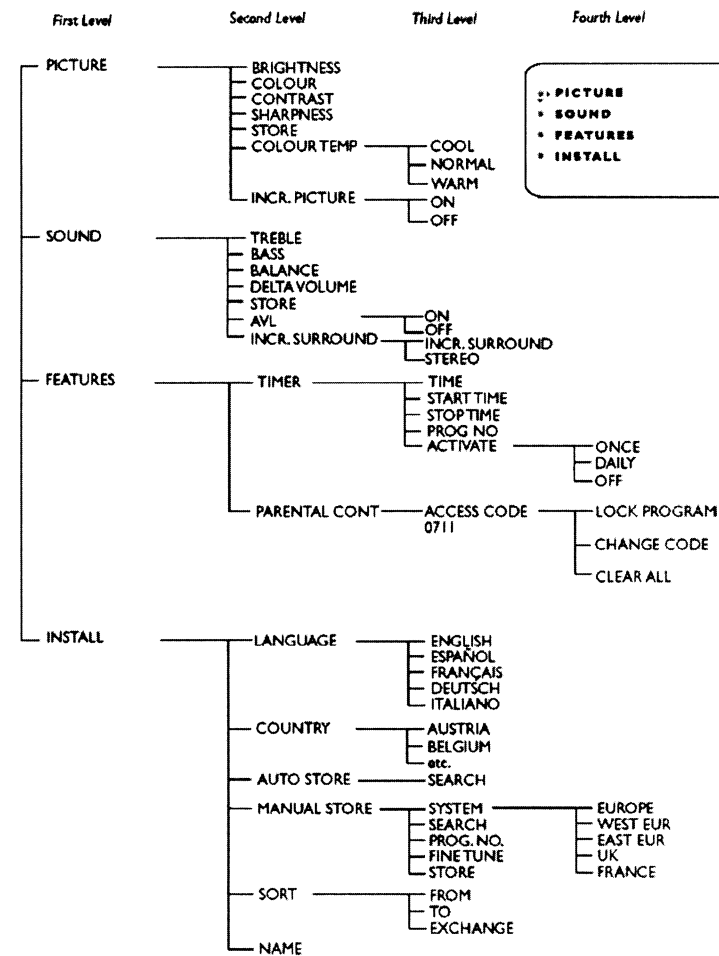


* Specifications are subject to change without prior notice.

OSD Control structure

In TV/Video Mode

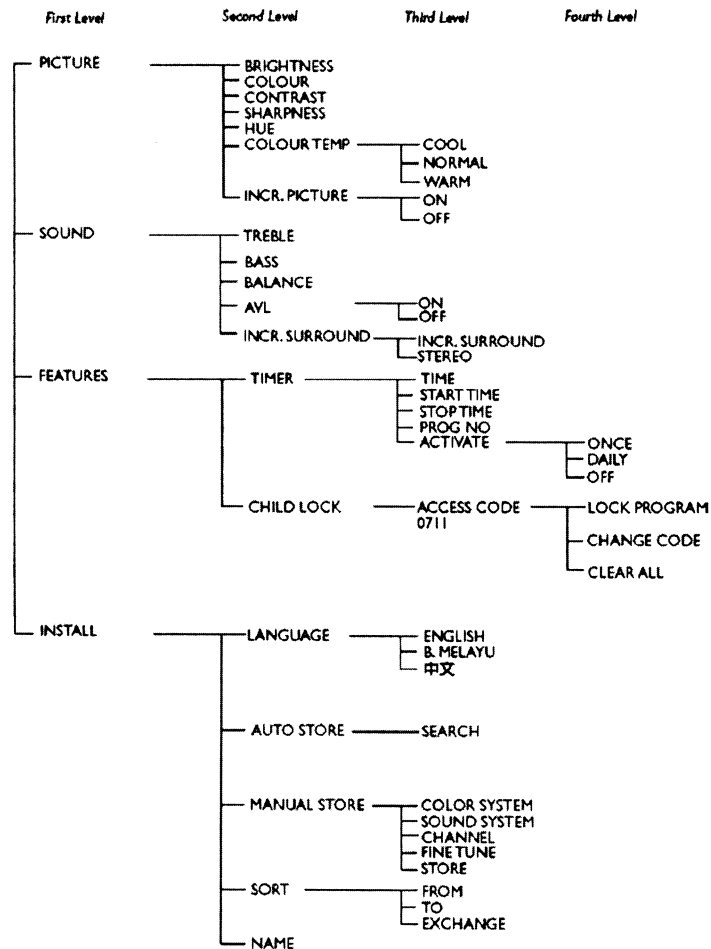
(For Europe)



* Specifications are subject to change without prior notice.

OSD Control structure

(For Asia Pacific)

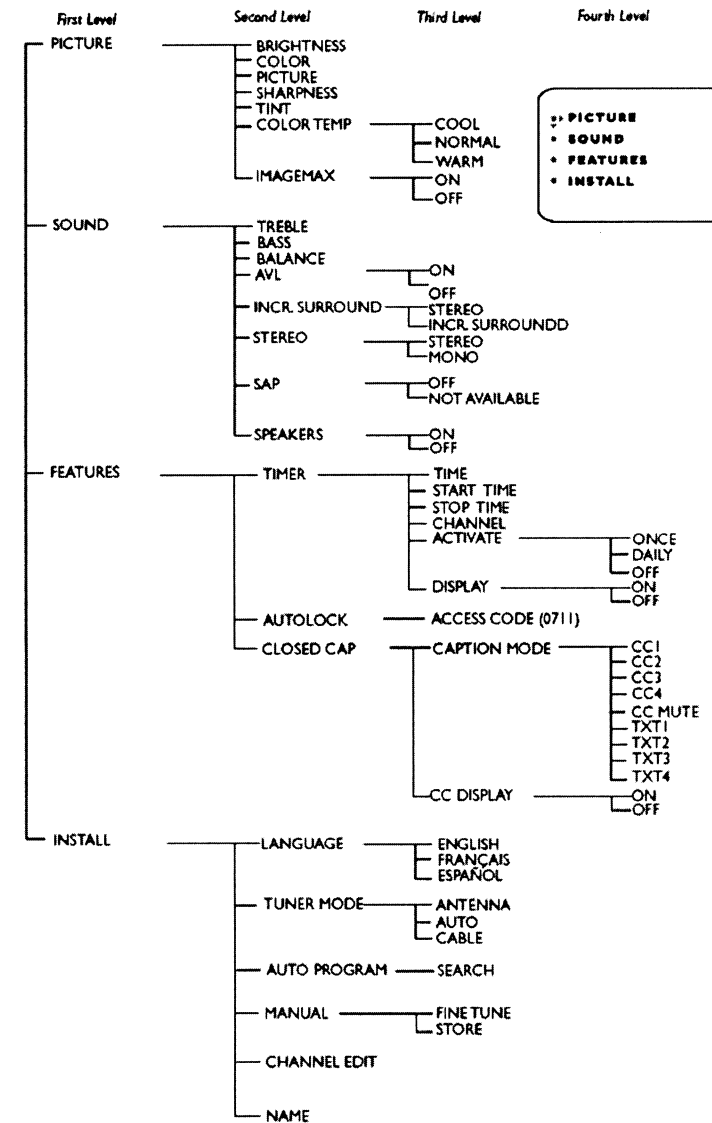


* Specifications are subject to change without prior notice.

OSD Control structure

In TV/Video Mode

(For NTSC system: North America, Philippine, Taiwan and Korea)



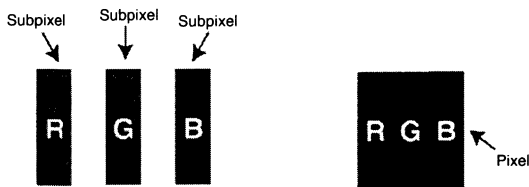
* Specifications are subject to change without prior notice.

0. General

This section explains the different types of pixel defects and defines acceptable defect levels of each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a TFT LCD panel must exceed these acceptable levels.

1. Definition of Pixels and Subpixels

A pixel, or picture element, is composed of three subpixels in the primary colors of red, green and blue. Many pixels together from an image. When all subpixels of a pixel are lit, the three colored subpixels together appear as a single white pixel. When all are dark, the three colored subpixels together appear as a single black pixel. Other combinations of lit and dark subpixels appear as single pixels of other colors.



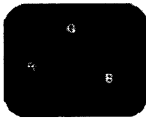
2. Types of Pixel Defects

Pixel and subpixel defects appear on the screen in different ways.

Bright dot defects

Bright dot defects appear as pixels or subpixels that are always lit or On . These are the types of bright dot defects:..

One lit red, green or blue subpixel



Two adjacent lit subpixels:

- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)



Three adjacent lit subpixels
(One white pixel)



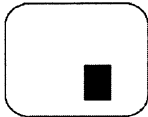
Black dot defects

Black dot defects appear as pixels or subpixels that are always dark or off . These are the types of black dot defects:

One dark subpixel



Two or three adjacent dark subpixels



3. Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a TFTLCD panel in a PHILIPS flat panel monitor must have pixel or subpixel defects exceeding the tolerances listed in the following tables.

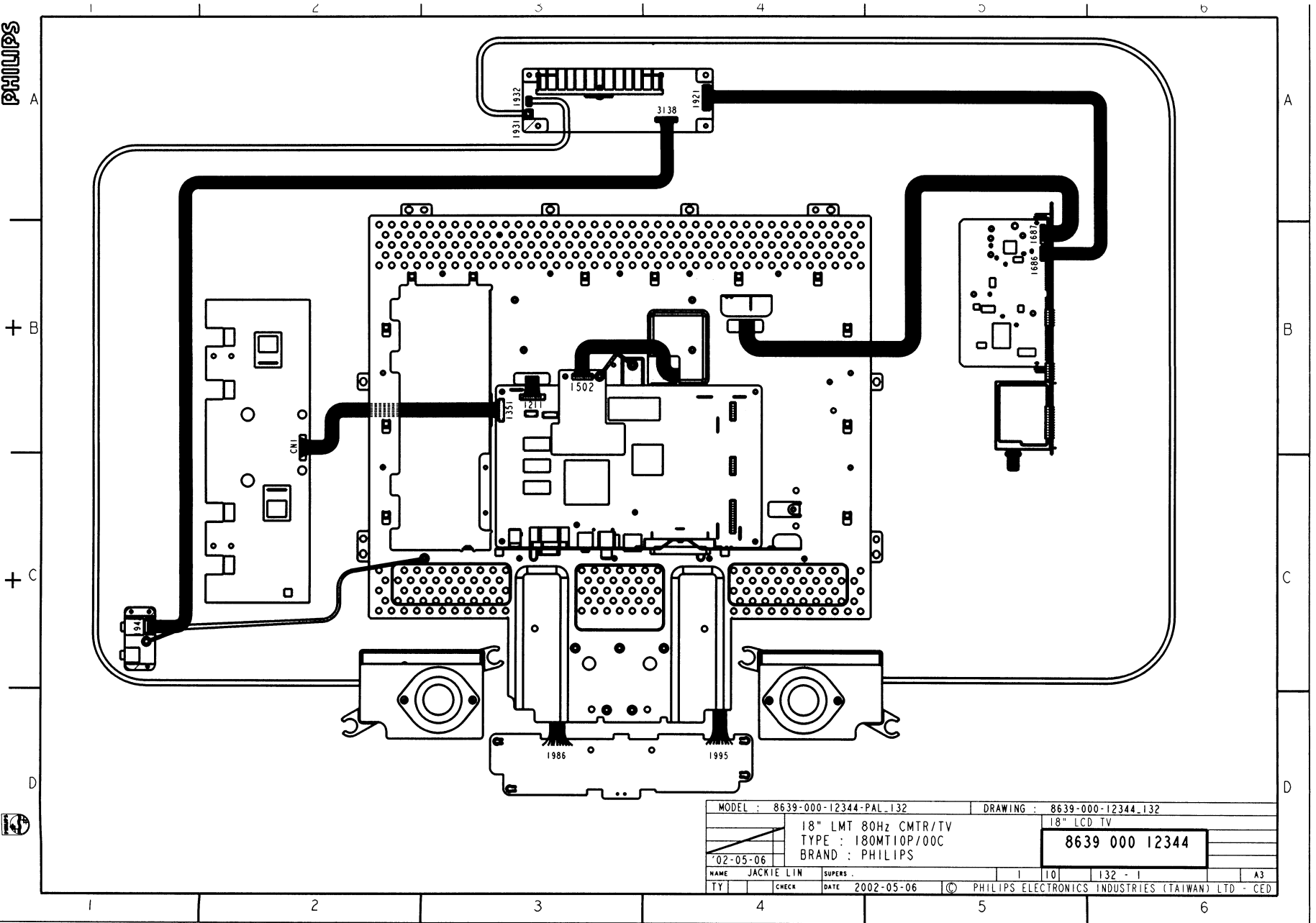
BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL	
	150MT	180MT
MODEL		
1 lit subpixel	4 or fewer	3 or fewer
2 adjacent lit subpixels	2 or fewer	2 or fewer
3 adjacent lit subpixels (one white pixel)	0	0
Distance between two bright dot defects*	15 mm or more	15 mm or more
Bright dot defects within 20 mm circle	3 or fewer	-
Total bright dot defects of all types	4 or fewer	3 or fewer

BLACK DOT DEFECTS	ACCEPTABLE LEVEL	
	150MT	180MT
MODEL		
1 dark subpixel	4 or fewer	3 or fewer
2 adjacent dark subpixels	2 or fewer	2 or fewer
3 adjacent dark subpixels	0	0
Distance between two black dot defects*	15 mm or more	15 mm or more
Black dot defects within 20 mm circle*	3 or fewer	-
Total black dot defects of all types	4 or fewer	3 or fewer

TOTAL DOT DEFECTS	ACCEPTABLE LEVEL	
	150MT	180MT
MODEL		
Total bright or black dot defects of all types	4 or fewer	6 or fewer

Note: 1 or 2 adjacent subpixel defects = 1 dot defect

Wiring Diagram



Electrical instructions

180MT10P LMT 25

Go to cover page

0. General

When carry-out the electrical settings in many cases a video signal must be applied to the monitor. A computer with :

- ATI VGA 1024 V6-1.04/PH BETA4 interface card
- PGA 1024 (4822 212 30916), Mach 8.
- PGA 1280 (4822 212 30917), Mach 32.
- ATIGPT-1600 (4822 397 10065), Mach 64 (up to 107kHz)

are used as the video signal source. The signal patterns are selected from the "service test software" package, see user guide 4822 727 19896 (ATI1024), or 4822 727 20273 (PGA 1280), or 4822 727 21046 (GPT-1600).

0.1 With normal VGA card:

If not using the ATI card during repair or alignment. The service engineer also can use this service test software adapting with normal standard VGA adaptor and using standard VGA mode 640 x 480, 31.5 kHz/60 Hz (only) as signal source.

0.2 AC/DC Measurement:

The measurements for AC waveform and DC figure is based on 1024 x 768 48kHz/60 Hz resolution mode with test pattern "32 gray scale".

Power input: 110V AC

1. General points

1.1 During the test and measuring, supply a distortion free AC mains voltage to the apparatus via an isolated transformer with low internal resistance.

1.2 All measurements mentioned hereafter are carried out at a normal mains voltage (90 - 132 VAC for USA version, 195 - 264 VAC for EUROPEAN version, or 90 - 264 VAC for the model with full range power supply, unless otherwise stated.)

1.3 All voltages are to be measurement or applied with respect to ground, unless otherwise stated. Note: don't use heat-sink as ground.

1.4 The test has to be done on a complete set including LCD panel in a room with temperature of 25 +/- 5 degree C.

1.5 All values mentioned in these test instruction are only applicable of a well aligned apparatus, with correct signal.

1.6 The letters symbols (B) and (S) placed behind the test instruction denotes

- (B): carried out 100% inspection at assembly line
- (S): carried out test by sampling

1.7 The white balance (color temperature), has to be tested in subdued lighted room.

1.8 Repetitive power on/off cycle are allowed except it should be avoided within 6 seconds.

2. Input signal

2.1.1 Signal type

Video : 0.7 Vp-p linear, positive polarity
Sync. : TTL level, separate, positive or negative polarity
Signal source: pattern generator format as attachment.
(table 1 to 17) Reference generator: CHROMA 2200 or 2250

2.1.2

RF Signal : Aerial input
Video signal : SCART input (Europe mode only)
Cinch input (NAFTA, AP mode only)
S video input

Audio signal : for S-terminal L/R audio input
PC line in
Audio Line out

2.2 PC Input signal mode

Factory preset video resolution

Dot rate (MHz)	H.freq (KHz)	Mode	Resolution	V.freq (Hz)
25.175	31.469	IBM VGA 10h	640 * 350	70.087
28.322	31.469	IBM VGA 3h	720 * 400	70.087
25.175	31.469	IBM VGA 12h	640 * 480	59.940
30.240	35.000	MACINTOSH	640 * 480	66.667
31.500	37.861	VESA	640 * 480	72.809
31.500	37.500	VESA	640 * 480	75.000
36.000	35.156	VESA	800 * 600	56.250
40.000	37.879	VESA	800 * 600	60.317
50.000	48.077	VESA	800 * 600	72.188
49.500	46.875	VESA	800 * 600	75.000
57.300	49.700	MACINTOSH	832 * 624	75.000
65.000	48.363	VESA	1024 * 768	60.004
75.000	56.476	VESA	1024 * 768	70.069
78.750	60.023	VESA	1024 * 768	75.029
100	68.681	MACINTOSH	1152 * 870	74.979
108	63.981	VESA	1280 * 1024	60.020
135	79.976	VESA	1280 * 1024	75.024

2.3 TV input signal Channel and pattern

2.3.1 Table 1 for NAFTA version

Signal Distribution Table (NTSC Cable)

PRG	CH	Frequency Carriers		TV System	Pattern
		Video	Sound		
1	A 03	61.25MHz	65.75MHz	NTSC-M	Color Circle
2	A 06	83.25MHz	87.75MHz	NTSC-M	Red Raster
3	A 09	187.25MHz	191.75MHz	NTSC-M	Circle Pattern
4	A 11	199.25MHz	203.75MHz	NTSC-M	Cross Hatch
5	A 13	211.25MHz	215.75MHz	NTSC-M	Two White Window
6	C 70	499.25MHz	503.75MHz	NTSC-M	Checkerboard
7	A 52	699.25MHz	703.75MHz	NTSC-M	Color Bar
8	A 69	801.25MHz	805.75MHz	NTSC-M	100% White

Table 1

26 180MT10P LMT

Go to cover page

2.3.2 Table2 for Europe and AP-multi

Signal Distribution Table (PAL Cable)

PRG	CH	Frequency Carriers		TV System	Pattern
		Video	Sound		
0					
1	AU37	590.25MHz	595.75MHz	PAL B (UK)	Pure White
2	AU2	64.25MHz	69.75MHz	PAL B (UK)	Circle Pattern
3	E7	189.25MHz	194.75MHz	PAL B (CCR)	Circle Pattern
4	G47	679.25MHz	684.75MHz	PAL G (CCR)	Circle Pattern
5	I23	487.25MHz	493.75MHz	PAL 1 (UK)	Circle Pattern
6	E12	224.25MHz	229.75MHz	PAL B (CCR)	Color Bar
7	AU7	182.25MHz	187.75MHz	PAL B (UK)	Color Bar
8	G68	847.25MHz	852.75MHz	PAL G (CCR)	100% White
9	AU9	196.25MHz	201.75MHz	PAL B (UK)	Checkerboard
10	AU10	209.25 MHz	214.75 MHz	PAL B (UK)	Crosshatch
11	AU0	46.25MHz	51.75MHz	PAL B (UK)	Color Bar
12	AU2	64.25MHz	69.75MHz	PAL B (UK)	Color Bar
13	AU5	102.25 MHz	107.75 MHz	PAL B (UK)	Crosshatch
14	AU5A	138.25MHz	143.75MHz	PAL B (UK)	Color Bar
15	AU7	182.25MHz	187.75MHz	PAL B (UK)	Pure White
16	AU9	196.25MHz	201.75MHz	PAL B (UK)	Pure White
17	AU10	209.25MHz	214.75MHz	PAL B (UK)	Circle Pattern
18	I23	487.25MHz	493.75MHz	PAL 1 (UK)	Circle Pattern
19	G28	527.25MHz	532.75MHz	PAL G (CCR)	Circle Pattern
20	AU37	590.25MHz	595.75MHz	PAL G (UK)	Circle Pattern
21	140	623.25MHz	629.75MHz	PAL 1 (UK)	Color Bar
22	CH44	655.25MHz	661.75MHz	PAL DK (UK)	Color Bar
23	160	783.25MHz	789.75MHz	PAL 1 (UK)	100% White
24	166	831.25MHz	837.75MHz	PAL 1 (UK)	Checkerboard
25	K21	471.25 MHz	477.75 MHz	SEC K1 (CCR)	Crosshatch
28	G28	527.25MHz	532.75MHz	PAL G (UK)	Color Bar

Table 2

Electrical instructions

3. AC adaptor

3.1 Setup the AC/P at 90VAC, and Output DC loading at 4.5Amp.
The DC output voltage is 12.1VDC

3.2 Adjustment is nothing to do

4. PC mode Display Adjustment

4.1 Display quality adjustment

Use timing mode as describe in 2.2, and use the POPO (pixel on pixel off) pattern to adjust the clock until no stripe and adjust the phase until clear picture.
Check all pre-setting 140 modes.

4.2 WHITE-D adjustment (B)

4.2.1 At factory mode apply 60KHz/75Hz mode with crosshatch pattern.

Set main controls brightness control at 100% and contrast to 50%. Set auto-sub function for auto offset and sub-con setup

4.2.2 Apply white pattern, set brightness control at 100%, and contrast control at 50%. Preset R, G, B gain at 127.

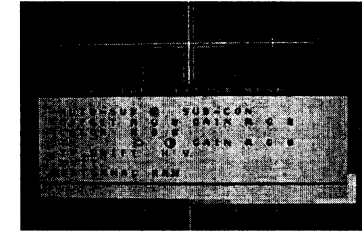
Adjust the R, G, B gain of Scalar in Factory Mode. (see Fig 1.)
The 1931 CIE chromaticity (X, Y) co-ordinates shall be:

	9300K	6500K
x (center)	0.281 0.005	0.312 0.005
y (center)	0.311 0.005	0.338 0.005

Use Minolta CA-110 for color coordinates and luminance Check.
Luminance > 250 Nits (CPT) in the center of the screen at Original color and PC Brightness control; Contrast control at 100%
Note : After white-D adjustment set brightness and contrast at 50%

4.3 Check the digital interface cable

Check the 64 grey level color poor & noise condition.



5.0 TV Mode display adjust

5.1.1 Geometry Adjustment (B)

A) INPUT REQUIREMENTS

Equipment : PM5515, PM5518 or FLUKE 54200
Input Signal Type : 1.1 for RF input signal within PAL system (for Europe and AP version), channel : E7 (189.25MHz) the pattern is using circle and crosshatch pattern
2. for S-Video input signal, within NTSC system (for Europe and AP version), the pattern is using Circle and cross hatch pattern
input Signal Strength : >= 1mV rms (60 dBuV) terminal Voltage.
1Vpp Y-signal, 300mVpp C-signal
Input Injection Point : Aerial input and S-Video input

B) ALIGNMENT METHOD

Initial Set-up : Set smart picture to Natural.
Method of Alignments : a. select TV channel, then adjust vertical shift, and horizontal shift to picture center then save.
b. select to S-video Adjust vertical shift, and horizontal shift to picture center then save.
c. Left space - Right space < 2mm

Electrical instructions

5.1.2 White balance adjustment (B)

A) GENERAL SET-UP

Equipment Requirements : Colour analyzer.

B) INPUT REQUIREMENTS

Input Signal Type : RF signal, modulated with white Pattern
Input Signal Strength : >= 10mVrms (80 dBuV) terminal voltage.
Input Injection Point : Aerial input

C) ALIGNMENT METHOD

Initial Set-up : After PC White D adjust
Set color to original color
Set TV Brightness = 122 ; Contrast = 64 in Factory mode (can be fine tuned)
Set smart picture to Natural (Europe, AP model)
Set Color Temp to Normal
Select COLOR TEMP or 100% Full White pattern by TV pattern generator

Method of Alignments : Adjust TV R, G, B gain
Adjust TV red, green and blue to the value in the table
Check the grey level color pool & noise condition if need adjust, please adjust TV Brightness and Contrast in Factory mode.

D) EXPECTED RESULTS

Measured Parameters : White balance.
Specifications : See table.
Units of Measurement : xy.

E) TABLE(S) : Specifications of white balance

Picture Mode x y
Normal (Natural) 300 +/- 5 325 +/- 5

Table 5.1: Readings with Philips Colour Meter.

5.2 VIDEO PROCESSING (Conjunction board A10 alignment)

5.2.1 RF AGC take over point adjustment.

Input : Test land of item 7681 pin 11 connector through the probe.
Input signal : IF signal modulated with a Grey scale video signal, video modulation - negative & Sound IF signal (33.4MHz / 31.5MHz / 41.25MHz for picture IF frequencies of 38.9MHz / 38MHz / 45.75MHz respectively), level at 13dB w.r.t. picture IF level, Without modulation (only carrier).

Input Probe : Input via 50 coaxial cable terminated with RC (120.10nF) network at I/P injection point.

Output : pin 1 of tuner connected to a DC voltmeter.
Set bimos : sub address 27, refer to table below.

Method :

Via I²C or with a factory remote control, adjust the AGC take over (data byte sub address 1E, D0-D5) to the step at which the DC voltage should be within 2.5 V AGC takeover voltage 4.6 V.
Record the AGC register content and store in the NVROM location 'TOP', address as specified in the attached 'memory layout' list.

Versions	IF Frequency (MHz)	IF signal level (dBuV)	Value of Sub address 27 of bimos
Europe model	38.9	105	40hex

5.2.2 Off-set IF demodulator Adjustment.

Input : Same as RF AGC adjustment.

Input Signal : Same as RF AGC adjustment, with picture IF signal modulated with a cross-hatch video signal instead of greyscale video signal & video level 105%.

Output : Sound decoder (device add. 80H / 81H for Write/Read) Read register Quasi-peak readout left ; Sub Add. 13H ; Reg. 0019H.

Set Sound decoder: 1. DSP write register : Prescale FM/AM ; Sub Add. 12H ; Reg. 000EH ; Data 7F00H.
2. DSP write register : Deemphasis FM ; Sub Add. 12H ; Reg. 000FH ; Data 3F00H.
3. DSP write register : Volume loudspeaker channel ; Sub Add. 12H ; Reg. 0000H ; Data 7F00H.

Method : Via I2C, adjust the 'Off-set IF demodulator' (data byte sub address 05, D0-D5) register value of the bimos so as to get the lowest read back value from the sound decoder.

This value of the 'Off-set IF demodulator' is to be stored in the NVROM locations 'OFFSET_IF_NEG' & 'OFFSET_IF_POS', address as specified in the attached 'memory layout' list.

◀◀ Go to cover page

Factory Mode Adjustment

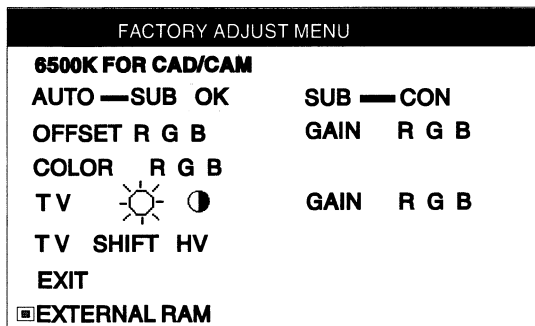
Entering Factory Adjustment Menu

Push **OK** & **AUTO** buttons then power on the monitor, release them after picture display normally. Press **OK** button to bring up OSD menu of factory mode as shown below.

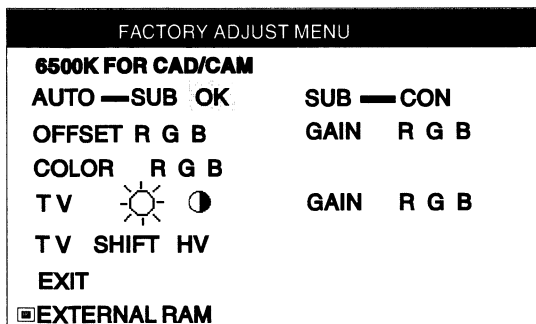


(PS: The Offset R G B function can be used to reduce or eliminate snowy noise on the background when the resolution of video signal is 1024 X 768 vertical 60Hz. Slightly increase or decrease the value until snowy noise completely disappears.)

Use ▼ button to select factory adjustment indication (for example: LCD TV V1.28 20011030, which is the entrance of the factory adjustment menu, press **OK** button to access it. The window shows as below.



Use ▲ or ▼ buttons to select SUB-CON, COLOR, R G B, etc. Use + or - buttons to decrease/increase the value of each item. **AUTO** : adjust Sub-brightness & Sub-contrast automatically.



Contrast adjustment (Sub-Contrast). Use this menu item to adjust the contrast gain of pre-amp ranges from 0 to 255.

GAIN R G B
COLOR R G B

Color temperature gain adjustment. Use these menu items to adjust the RGB gains of pre-amp for different color temperatures, ranges from 0 to 255.

OFFSET R G B

Sub-Brightness adjustment. Use this menu item to adjust the brightness level (DC-level) of pre-amp range from 0 to 255.

All units that are returned for service or repair must pass the original manufactures safety tests. Safety testing requires both *HiPot* and *Ground Continuity* testing.

HI-POT TEST INSTRUCTION

1. Application requirements

- 1.1 All mains operated products must pass the Hi-Pot test as described in this instruction.
- 1.2 This test must be performed again after the covers have been refitted following the repair, inspection or modification of the product.

2. Test method

2.1 Connecting conditions

- 2.1.1 The test specified must be applied between the parallel-blade plug of the mains cord and all accessible metal parts of the product.
- 2.1.2 Before carrying out the test, reliable conductive connections must be ensured and thereafter be maintained throughout the test period.
- 2.1.3 The mains switch(es) must be in the "ON" position.

2.2 Test Requirements

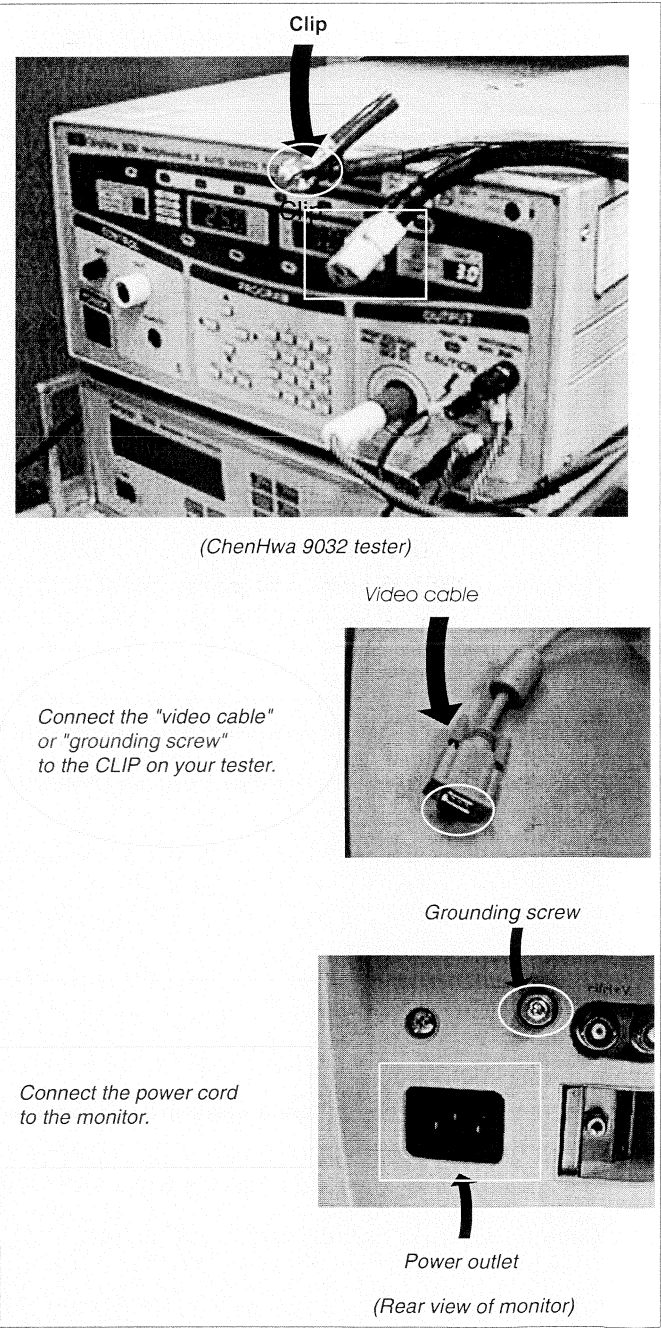
All products should be HiPot and Ground Continuity tested as follows:

Condition	HiPot Test for products where the mains input range is Full range(or 220V AC)	HiPot Test for products where the mains input is 110V AC(USA type)	Ground Continuity Test requirement
Test voltage	2820VDC (2000VAC)	1700VDC (1200VAC)	Test current: 25A,AC Test time: 3 seconds(min.) Resistance required: $\leq 0.09 + R$ ohm, R is the resistance of the mains cord.
Test time (min.)	3 seconds	1 second	
Trip current (Tester)	set at 100 uA for Max. limitation; set at 0.1 uA for Min. limitation	5 mA	
Ramp time	set at 2 seconds		

- 2.2.1 The test with AC voltage is only for production purpose, **Service center shall use DC voltage.**
- 2.2.2 The minimum test duration for Quality Control Inspector must be 1 minute. No breakdown during the test.
- 2.2.3 The test voltage must be maintained within the specified voltage + 5%.
- 2.2.4 The grounding blade or pin of mains plug must be conducted with accessible metal parts.

3. Equipments and Connection

- 3.1. Equipments
For example :
 - ChenHwa 9032 PROGRAMMABLE AUTO SAFETY TESTER
 - ChenHwa 510B Digital Grounding Continuity Tester
 - ChenHwa 901 (AC Hi-pot test), 902 (AC, DC Hi-pot test) Withstanding Tester
- 3.2. Connection
* Turn on the power switch of monitor before Hipot and Ground Continuity testing.



4. Recording

Hipot and Ground Continuity testing records have to be kept for a period of 10 years.

Go to cover page

General

DDC Data Re-programming

In case the DDC data memory IC or main EEPROM which storage all factory settings were replaced due to a defect, the serial numbers have to be re-programmed.

It is advised to re-soldered DDC IC and main EEPROM from the old board onto the new board if circuit board have been replaced, in this case the DDC data does not need to be re-programmed.

Additional information

Additional information about DDC (Display Data Channel) may be obtained from Video Electronics Standards Association (VESA). Extended Display Identification Data(EDID) information may be also obtained from VESA.

DDC EDID structure

For Analog interface: Standard Version 3.0

Structure Version 1.2

For Digital interface: Standard Version 3.0

Structure Version 1.3

System and equipment requirements

1. An i486 (or above) personal computer or compatible.
2. Microsoft operation system Windows 95/98.
3. EDID301.EXE program (3138 106 10103) as shown in Fig. 1
4. A/D Alignment kits (3138 106 10079):
 - a. Alignment box x1 (as Fig. 2)
 - b. Printer cable x1
 - c. (D-Sub) to (D-Sub) cable x1

Note: The EDID301.EXE (Release Version 1.58 20000818) is a windows-based program, which cannot be run in MS-DOS.

Diskette with EDID301.EXE



Fig. 1

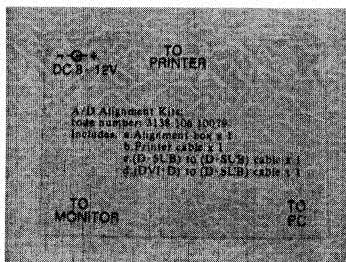
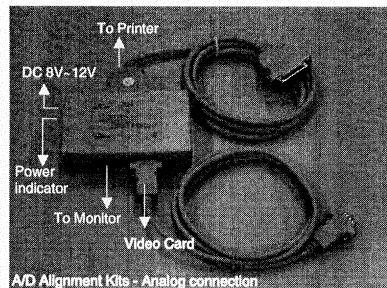
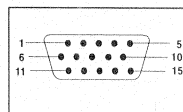


Fig. 2



Note: The alignment box has already built-in a batteries socket for using batteries (9V) as power source. Pull out the socket by remove four screws at the rear of box. Please do not forget that remove batteries after programming. The energy of batteries can only drive circuits for a short period of time.

Pin assignment



Pin No.	Assignment	Pin No.	Assignment
1	Red video input	9	+5V
2	Green video input	10	Ground
3	Blue video input	11	Ground
4	Ground	12	Serial data line(SDA)
5	No Connected	13	H.Sync
6	Red video ground	14	V.Sync(VCLK for DDC)
7	Green video ground	15	Data clock line(SCL)
8	Blue video ground		

Go to cover page

Configuration and procedure

There are 2 chips contained OSD string, serial number...etc on the circuit board, main EEPROM (7402, 32k) which storage all factory settings, OSD string.DDC IC (7202) which storage 128byte EDID data (serial number...etc.). Following descriptions are the connection and procedure for Analog DDC application, the main EEPROM can be re-programmed along with Analog IC by enable factory memory data write function on the DDC program (EDID301.EXE).

Initialize alignment box

In order to avoid that monitor entering power saving mode due to sync will cut off by alignment box, it is necessary to initialize alignment box before running programming software (EDID301.EXE). Following steps show you the procedures and connection.

- Step 1: Supply 8~12V DC power source to the Alignment box by plugging a DC power cord or using batteries.
- Step 2: Connecting printer cable and video cable of monitor as Fig. 3

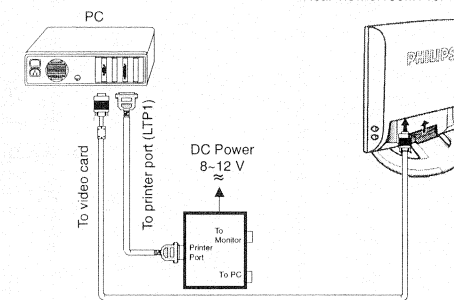


Fig. 3

Step 3: Installation of EDID301.EXE

Method 1: Start on DDC program

Start Microsoft Windows.

1. Insert the disk containing EDID301.EXE program into floppy disk drive.
2. Click **Start**, choose Run at start menu of Windows 95/98 as shown in Fig. 4.

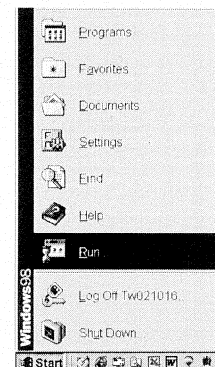


Fig. 4

3. At the submenu, type the letter of your computer's floppy disk drive followed by :EDID301 (for example, A:\EDID301, as shown in Fig. 5).

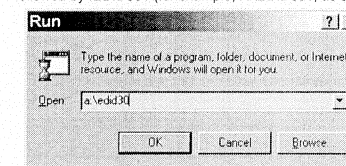


Fig. 5

4. Click **OK** button. The main menu appears (as shown in Fig. 6). This is for initialize alignment box.

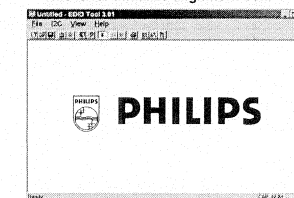


Fig. 6

Note 1: If the connection is improper, you will see the following error message (as shown in Fig. 7) before entering the main menu. Meanwhile, the (read EDID) function will be disable. At this time, please make sure all cables are connected correctly and fixedly, and the procedure has been performed properly.

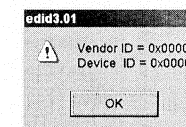


Fig. 7

Method 2: After create a shortcut of EDID301.EXE

: Double click EDID301 icon (as shown in Fig. 8) which is on the screen of Windows Wallpaper. Bring up main menu of EDID301 as shown in Fig. 9. This is for initialize alignment box.



Fig. 8

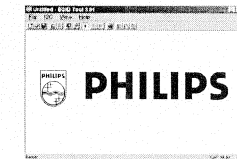
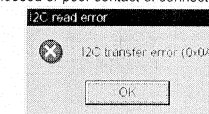


Fig. 9

- Note 2: During the loading, EDID301 will verify the EDID data which just loaded from monitor before proceed any further function, once the data structure of EDID can not be recognized, the following error message will appear on the screen as below. Please confirm following steps to avoid this message.
1. The data structure of EDID was incorrect.
 2. DDC IC that you are trying to load data is empty.
 3. Wrong communication channel has set at configuration setup windows.
 4. Cables loosed or poor contact of connection.



Go to cover page

Re-programming Analog DDC IC

Step 1: After initialize alignment box, connecting all cables and box as shown in Fig. 10

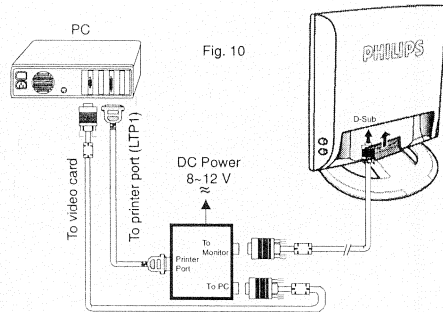


Fig. 10

Step 2: Read DDC data from monitor

- Click icon as shown in Fig. 11 from the tool bar to bring up the Channels "Configuration Setup" windows as shown in Fig. 12.

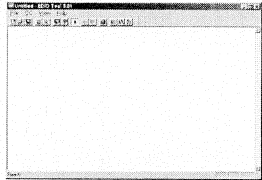


Fig. 11

- Select the DDC2B as the communication channel. Select "Enable" & fill out "F0" for Mapped EDID page address as shown in Fig. 12.

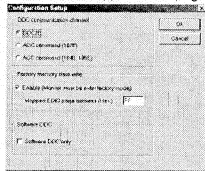


Fig. 12

- Click OK button to confirm your selection.

- Click icon (Read EDID function) to read DDC EDID data from monitor. The EDID codes will display on screen as shown in Fig. 13.

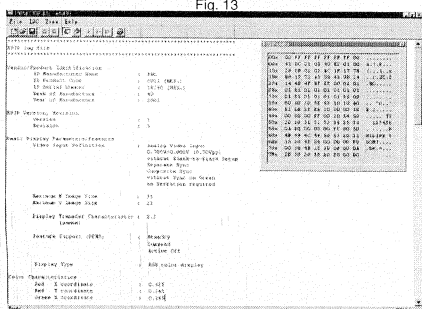
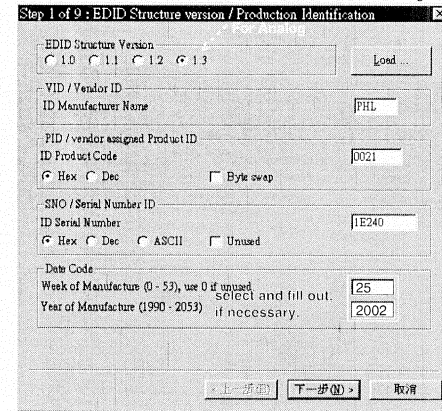


Fig. 13

Step 3: Modify DDC data (verify EDID version, week, year)

- Click (new function) icon from the tool bar, bring up Step 1 of 9 as shown in Fig. 14. EDID30 DDC application provides the function selection and text change (select & fill out) from Step 1 to Step 9.

Fig. 14



Step 4: Modify DDC data (Monitor Serial No.)

- Click Next, bring up Fig. 15.

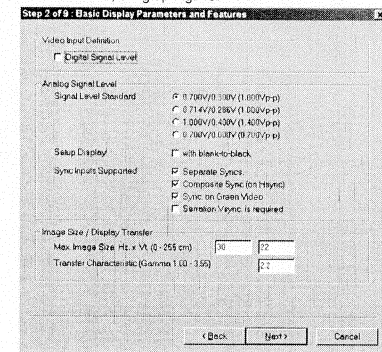


Fig. 15

- Click Next, bring up Fig. 16.

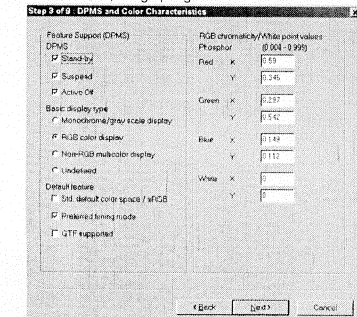


Fig. 16

- Click Next, bring up Fig. 17.

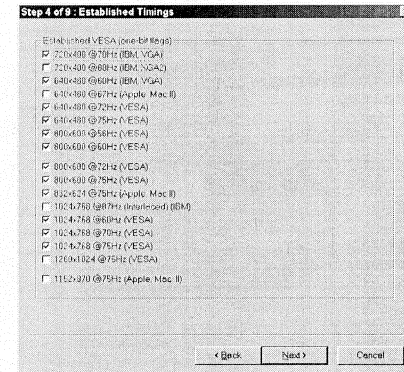


Fig. 17

- Click Next, bring up Fig. 18.

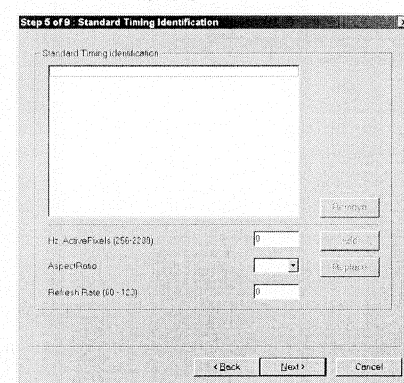


Fig. 18

- Click Next, bring up Fig. 19.

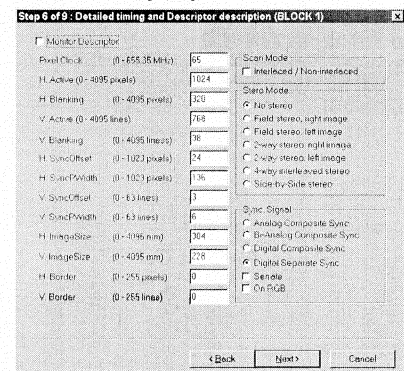


Fig. 19

- Click Next, bring up Fig. 20.

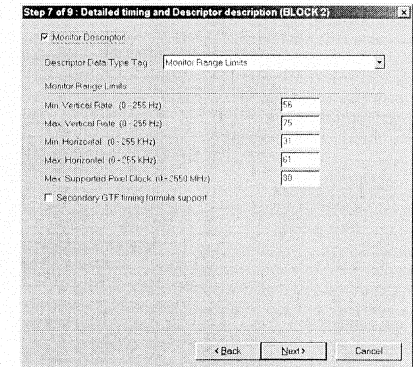


Fig. 20

- Click Next, bring up Fig. 21.

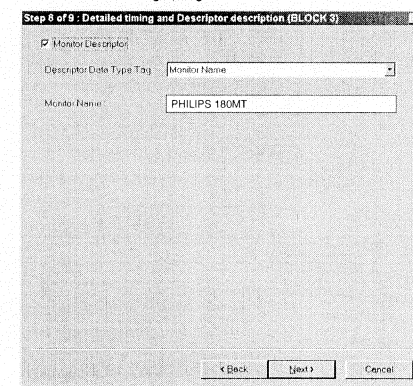


Fig. 21

- Click Next, bring up Fig. 22.

- Fill out serial number.
- Click Finish to exit the Step window.

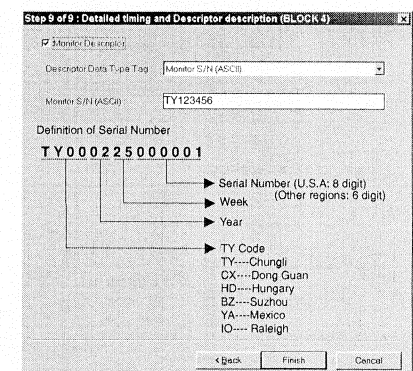


Fig. 22

Go to cover page

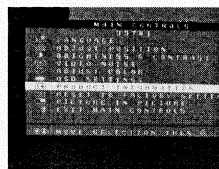
Step 5: Access Factory Mode for DDC data writing

Factory Mode:

How to Get into Factory Mode Menu

Push Menu "OK" & "ATUO" & " " buttons simultaneously until picture comes on the screen.

Press Menu "OK" button, bring up Factory mode indication as shown in Fig 23.



Factory Mode

Fig. 23

Step 6: Write DDC data

1. Click (Write EDID) icon from the tool bar to write DDC data. (0% ~ 100%, -> READY)
2. Click (Read EDID) to re-confirm it.

Step 7: Reconfirm Monitor Serial Number in User Mode

1. Go back to USER Mode as shown in Fig. 24 : Turn off monitor, then turn on monitor again => leave factory mode and return to User Mode directly.



User Mode Fig. 24

2. Select "Product Information" => Press "OK" button => Bring up Fig. 25.

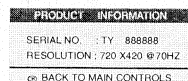


Fig. 25

3. To match with the serial number modification on EEPROM(OSD) See page 116~117.

Step 8: Save DDC data

Sometimes, you may need to save DDC data as a text file for using in other IC chip. To save DDC data, follow the steps below:

1. Click (Save) icon (or click "file"-> "save as") from the tool bar and give a file name as shown in Fig. 26. The file type is EDID30 file (*.ddc) which can be open in WordPad. By using WordPad, the texts of DDC data & table (128 bytes, hex code) can be modified. If DDC TEXTS & HEX Table are completely correct, it can be saved as .ddc file to re-load it into DDC IC & EEPROM for DDC Data application.

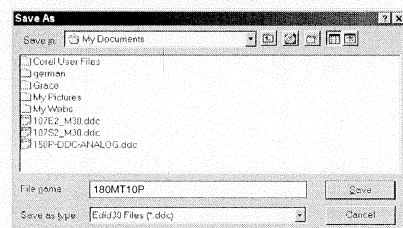


Fig. 26

2. Click Save.

Step 9: Load DDC data

1. Click from the tool bar.
2. Select the file you want to open as shown in Fig. 27.
3. Click Open.

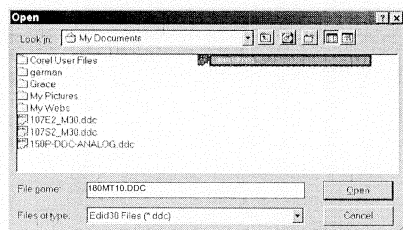


Fig. 27

Step 9: Exit DDC program

Pull down the File menu and select Exit as shown in Fig. 28.

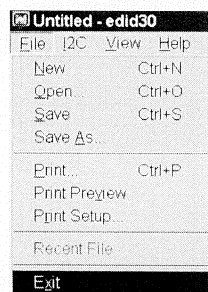


Fig. 28

DDC data of Analog

180MT10P LMT 35**Go to cover page**

THE DISPLAY DATA CHANNEL (DDC 2B) CONTENT
(FOR 180MT10P/00C LCD Monitor / TV)

```
*****
EDID log file
*****
Vendor/Product Identification
ID Manufacturer Name   : PHL
ID Product Code        : 0022 (HEX.)
ID Serial Number       : 1E240 (HEX.)
Week of Manufacture    : 25
Year of Manufacture    : 2002

EDID Version, Revision
Version                : 1
Revision               : 3

Basic Display Parameters/Features
Video Input Definition : Analog Video Input
                      : 0.700V/0.000V (0.70Vpp)
                      : without Blank-to-Black Setup
                      : Separate Sync
                      : Composite Sync
                      : without Sync on Green
                      : no Serration required

Maximum H Image Size : 36
Maximum V Image Size : 29

Display Transfer Characteristic : 2.7
(Gamma)

Feature Support (DPMS): Standby
                      : Suspend
                      : Active Off

Display Type          : RGB colordisplay

Color Characteristics
Red X coordinate      : 0.63
Red Y coordinate      : 0.34
Green X coordinate    : 0.28
Green Y coordinate    : 0.61
Blue X coordinate     : 0.14
Blue Y coordinate     : 0.09
White X coordinate    : 0.281
White Y coordinate    : 0.311

Established Timings
Established Timings I : 720 x 400 @70Hz (IBM,VGA)
                      : 640 x 480 @60Hz (IBM,VGA)
                      : 640 x 480 @67Hz (Apple,Mac II)
                      : 640 x 480 @72Hz (VESA)
                      : 640 x 480 @75Hz (VESA)
                      : 800 x 600 @56Hz (VESA)
                      : 800 x 600 @60Hz (VESA)

Established Timings II : 800 x 600 @72Hz (VESA)
                      : 800 x 600 @75Hz (VESA)
                      : 832 x 624 @75Hz (Apple,Mac II)
                      : 1024 x 768 @60Hz (VESA)
                      : 1024 x 768 @70Hz (VESA)
                      : 1024 x 768 @75Hz (VESA)
                      : 1280 x 1024 @75Hz (VESA)

Manufacturer's timings: 1152 x 870 @ (Apple ,Mac II)

Standard Timing Identification #1
Horizontal active pixels:1280
Aspect Ratio           : 5:4
Refresh Rate           : 60
```

```
Detailed Timing #1
Pixel Clock (MHz)      : 25.18
H Active (pixels)      : 640
H Blanking (pixels)    : 160
V Active (lines)       : 350
V Blanking (lines)     : 99
H Sync Offset (F Porch)(pixels): 16
H Sync Pulse Width (pixels) : 96
V Sync Offset (F Porch)(lines) : 37
V Sync Pulse Width (lines): 2
H Image Size (mm)      : 306
V Image Size (mm)      : 230
H Border (pixels)      : 0
V Border (lines)       : 0
Flags                  : Non-interlaced
                      : Normal Display, No stereo
                      : Digital Separate sync.
                      : Negative Vertical Sync.
                      : Negative Horizontal Sync.

Monitor Descriptor #2
Serial Number          : TY 123456

Monitor Descriptor #3
Monitor Name           : PHILIPS 180MT

Monitor Descriptor #4
Monitor Range Limits
Min. Vt rateHz        : 56
Max. Vt rateHz        : 75
Min. Horiz. ratekHz    : 30
Max. Horiz. ratekHz    : 80
Max. Supported Pixel   : 140

No secondary GTF timing formula supported.

Extension Flag         : 0

Check sum              : 7A (HEX.)
```

```
*****
EDID data (128bytes)
*****
0:00 1:ff 2:ff 3:ff 4:ff 5:ff 6:ff 7:00
8:41 9:0c 10:21 11:00 12:40 13:e2 14:01 15:00
16:19 17:0c 18:01 19:03 20:6c 21:24 22:1d 23:aa
24:e8 25:4d 26:c2 27:a1 28:57 29:47 30:9c 31:23
32:17 33:48 34:4f 35:bf 36:ef 37:80 38:81 39:80
40:01 41:01 42:01 43:01 44:01 45:01 46:01 47:01
48:01 49:01 50:01 51:01 52:01 53:01 54:d6 55:09
56:80 57:a0 58:20 59:5e 60:63 61:10 62:10 63:60
64:52 65:08 66:32 67:e6 68:10 69:00 70:00 71:18
72:00 73:00 74:00 75:ff 76:00 77:20 78:54 79:59
80:20 81:20 82:31 83:32 84:33 85:34 86:35 87:36
88:0a 89:20 90:00 91:00 92:00 93:fc 94:00 95:50
96:48 97:49 98:4c 99:49 100:50 101:53 102:20 103:31
104:38 105:30 106:4d 107:54 108:00 109:00 110:00 111:fd
112:00 113:38 114:4b 115:1e 116:50 117:0e 118:00 119:0a
120:20 121:20 122:20 123:20 124:20 125:20 126:00 127:7a
**Note1: Address 78&79 is Factory code
```

◀◀ Go to cover page

When the serial number inside DDC IC has been changed, the serial number inside EEPROM (in User mode, the serial number of monitor can be found by OSD as shown in Fig. 1 also.) should be changed at the same time.

Serial number modification in EEPROM (near CPU) for On Screen Display (Factory mode & User mode)

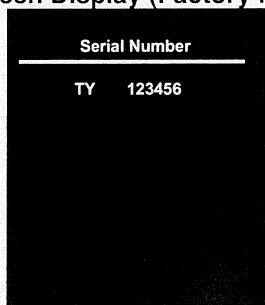


Fig. 1

Due to different communication structures were implement for DDC IC and EEPROM (serial number) application as below.

(15pin D-SUB) ----- CPU ----- DDC IC
I2C I2C

(15pin D-SUB) ----- CPU ----- EEPROM (OSD -> Serial number)
RS232 I2C

Update/Modify the serial number of monitor as shown in Fig. 1, please follow the steps as below.

1. connection of RS232 COMMUNICATION as shown in Fig. 2

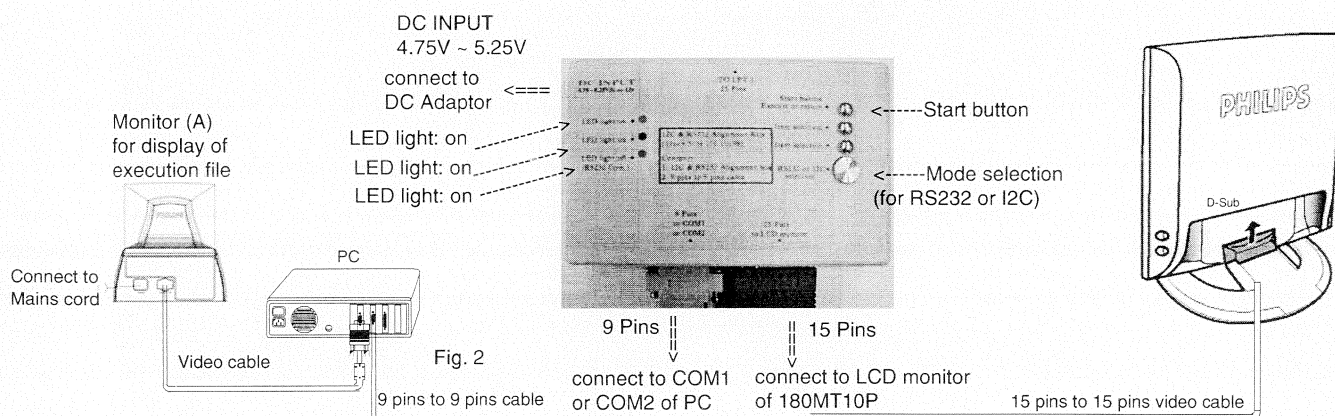


Fig. 2

I2C & RS232 Alignment Kits
(12nc = 3138 106 10198)

Contents :

1. I2C & RS232 Alignment box
2. 9 pins to 9 pins cable

- Connect DC adaptor (4.75 ~ 5.25Vdc) to Alignment box.
- 3 LED light should be at ON status at this moment.
- Connect 9 pins cable
- Connect 15pins D-SUB between Monitor and Alignment box.

Bring up Fig. 3



Fig. 3

- Press button1, the Red LED light should be at OFF status at this moment.
- Bring up Fig.5.
- (If it is not at RS232 COMMUNICATION status, Mode selection key can be used for exchange.
- For example : RS232 COMMUNICATION, I2C COMMUNICATION)

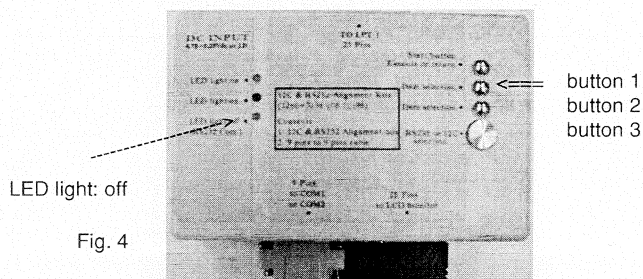


Fig. 4

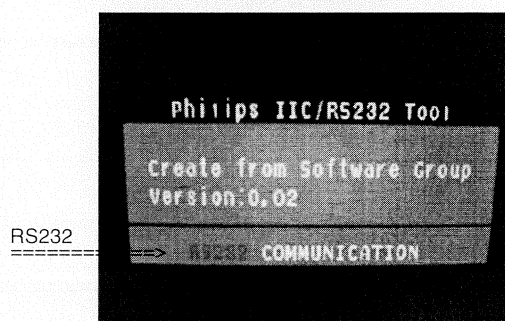


Fig. 5

2. Update/Modify serial number by DDCRUN (execution file) in Factory mode.

- make a directory and copy "DDCRUN.EXE", "DDC.CFG", "DDC.HEX" into folder as shown in Fig. 6.



Fig. 6

differ from "PHL18HITJ.PAL-DDC-ANALOG.ddc"

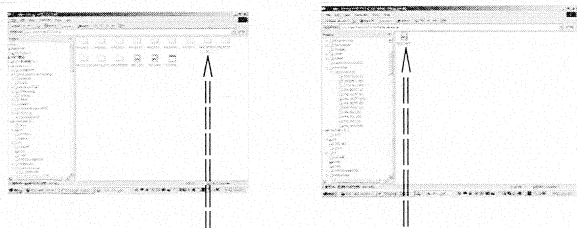


Fig. 7

PHL18HIT.PAL (HIT panel)

The file name of "DDC.HEX" has been defined by source code of DDCRUN.EXE.

The contents of DDC.HEX are different as shown in Fig. 6 & 7. Make sure to put "DDC.HEX" (for example : ddc contents (Fig.6) of PHL18HIT.PAL) together with "DDC.CFG" & "DDCRUN.EXE" each time. It means [copy different DDC.HEX and put it together with "DDC.CFG" & "DDCRUN.EXE"] each time for application of serial number.

In DOS mode : (made directory already)

```
C:\WINDOWS>CD\
C:\>CD IICRS232
C:\IICRS232>CD RS232EXE
C:\IICRS232\RS232EXE>DIR
```



Fig. 8

Folder with "DDC.CFG", "DDC.HEX", "DDCRUN.EXE" as shown in Fig. 8.

```
C:\IICRS232\RS232EXE>EDIT DDC.CFG
```

(press Enter)

PHL18HIT.PAL(HIT panel)

- Config. setting "2 58 F0" as shown in Fig. 9 for 180MT10P.

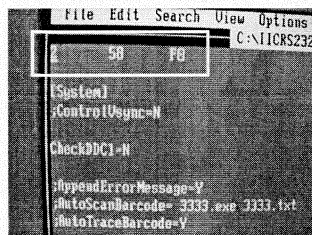


Fig. 9

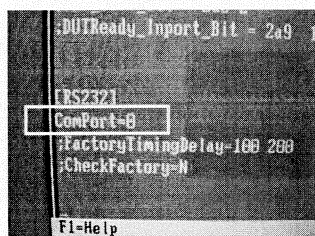


Fig. 10

- Check ComPort setting as shown in Fig. 10 for RS232 (9 pins) cable.

3. Serial number application - Barcode format setting

```
C:\IICRS232\RS232EXE>DDCRUN
```

(press Enter)

Bring up : definition of Barcode format setting as shown in Fig. 11.



Fig. 11

```
C:\IICRS232\RS232EXE>DDCRUN PHLW_RD /T/YxyYWWSSSSSS
```

(press Enter)

Bring up : contents of DDCRUN as shown in Fig. 12.

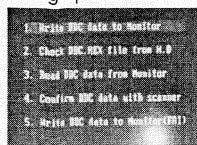


Fig. 12

"PHLW_RD (fixed name)" was defined by source code of DDCRUN for Philips models already.

As shown in Fig. 12 (1. write DDC data to monitor), press Enter
Bring up : contents for fill out Serial number as shown in Fig. 13.

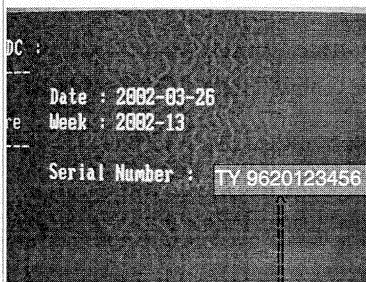


Fig. 13

For example : Fill out "TY 9620123456"

Press Enter

Bring up : Fig. 14 to ask "Entry Factory mode".

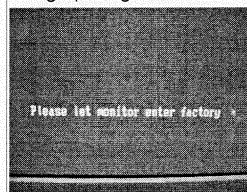


Fig. 14

Access Factory Mode

Step 1 :

Turn off monitor.

Step 2 :

[Push Menu " OK " & " AUTO " buttons at the same time and hold it until comes out "Windows screen"] + [Press power " " button and release it instantly]

Press Enter

Bring up : Fig. 15 (a few seconds only)

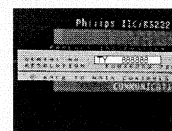
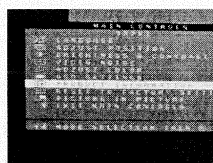


Fig. 15

Verify Serial number :

By OSD as shown in Fig. 16 & 17 to verify the Serial number.

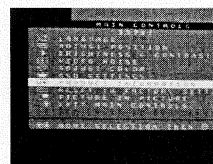


Fig. 16

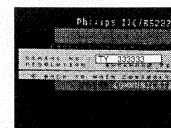


Fig. 17

Serial number - (Before)



Fig. 18

Serial number - (After)



==Fill out "Q" : Quit Serial number application.

==Press "ESC" : Go back to DOS mode.
Then, finish.

◀◀ Go to cover page

0. Warning

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the unit via a wrist wrap with resistance. Keep components and tools also at the same potential !

1. Servicing of SMDs (Surface Mounted Devices)

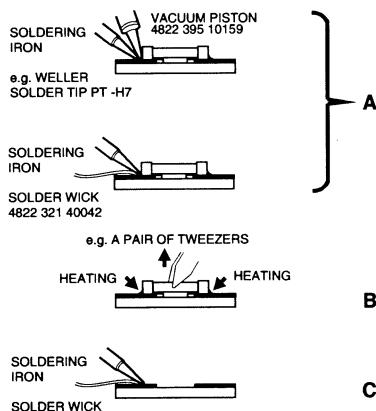
1.1 General cautions on handling and storage

- Oxidation on the terminals of SMDs results in poor soldering. Do not handle SMDs with bare hands.
- Avoid using storage places that are sensitive to oxidation such as places with sulphur or chlorine gas, direct sunlight, high temperatures or a high degree of humidity. The capacitance or resistance value of the SMDs may be affected by this.
- Rough handling of circuit boards containing SMDs may cause damage to the components as well as the circuit boards. Circuit boards containing SMDs should never be bent or flexed. Different circuit board materials expand and contract at different rates when heated or cooled and the components and/or solder connections may be damaged due to the stress. Never rub or scrape chip components as this may cause the value of the component to change. Similarly, do not slide the circuit board across any surface.

1.2 Removal of SMDs

- Heat the solder (for 2-3 seconds) at each terminal of the chip. By means of litz wire and a slight horizontal force, small components can be removed with the soldering iron. They can also be removed with a solder sucker (see Fig. 1A)

Fig. 1 DISMOUNTING



- While holding the SMD with a pair of tweezers, take it off gently using the soldering iron's heat applied to each terminal (see Fig. 1 B).
- Remove the excess solder on the solder lands by means of litz wire or a solder sucker (see Fig. 1C).

1.3 Caution on removal

- When handling the soldering iron, use suitable pressure and be careful.
- When removing the chip, do not use undue force with the pair of tweezers.
- The soldering iron to be used (approx. 30 W) should

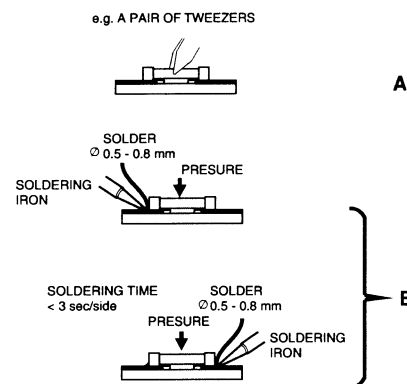
preferably be equipped with a thermal control (soldering temperature: 225 to 250 °C).

- The chip, once removed, must never be reused.

1.4 Attachment of SMDs

- Locate the SMD on the solder lands by means of tweezers and solder the component on one side. Ensure that the component is positioned correctly on the solder lands (see Fig. 2A).
- Next complete the soldering of the terminals of the component (see Fig. 2B).

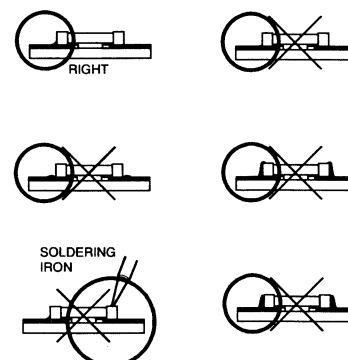
Fig. 2 MOUNTING



2. Caution when attaching SMDs

- When soldering the SMD terminals, do not touch them directly with the soldering iron. The soldering should be done as quickly as possible, care must be taken to avoid damage to the terminals of the SMDs themselves.
- Keep the SMD's body in contact with the printed board when soldering.
- The soldering iron to be used (approx. 30 W) should preferably be equipped with a thermal control (soldering temperature: 225 to 250 °C).
- Soldering should not be done outside the solder land.
- Soldering flux (of rosin) may be used, but should not be acidic.
- After soldering, let the SMD cool down gradually at room temperature.
- The quantity of solder must be proportional to the size of the solder land. If the quantity is too great, the SMD might crack or the solder lands might be torn loose from the printed board (see Fig. 3).

Fig. 3 Examples



Colour adjustment

180MT10P LMT 39
 Go to cover page

LCD COLOUR ANALYZER - CA110

1. SUMMARY

The LCD Colour Analyzer CA-110 was designed to upgrade the white-balance process on production lines for colour LCD televisions and computer colour LCD panels in the colour LCD industry. The CA-110 consists of a main unit and a measuring probe. The measuring probe utilizes an optical system suitable for measurement of colour LCDs and is equipped with a viewfinder to verify the area to be measured.

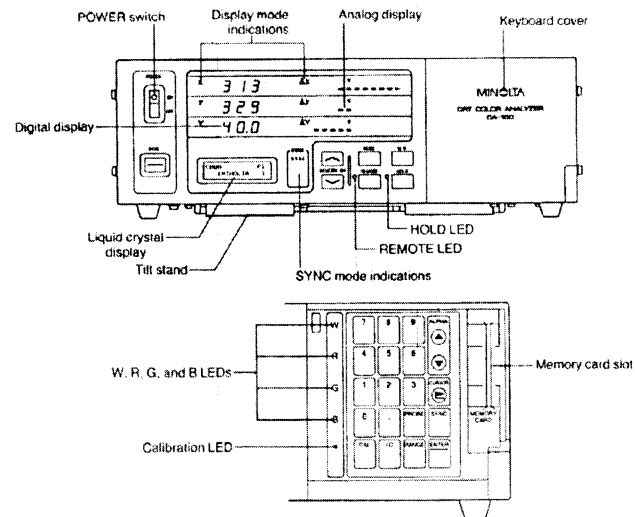
2. APPLICATIONS

- * White-balance adjustment and inspection on LCD production lines.
- * Quality control and shipping inspection by LCD manufacturers.
- * Inspection of LCDs upon receipt by computer manufacturers.

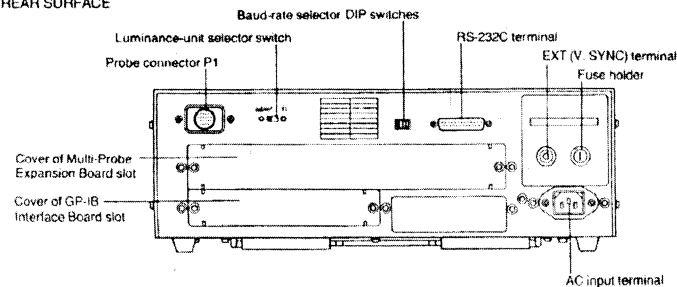
NAMES OF PARTS

Main Unit

FRONT SURFACE



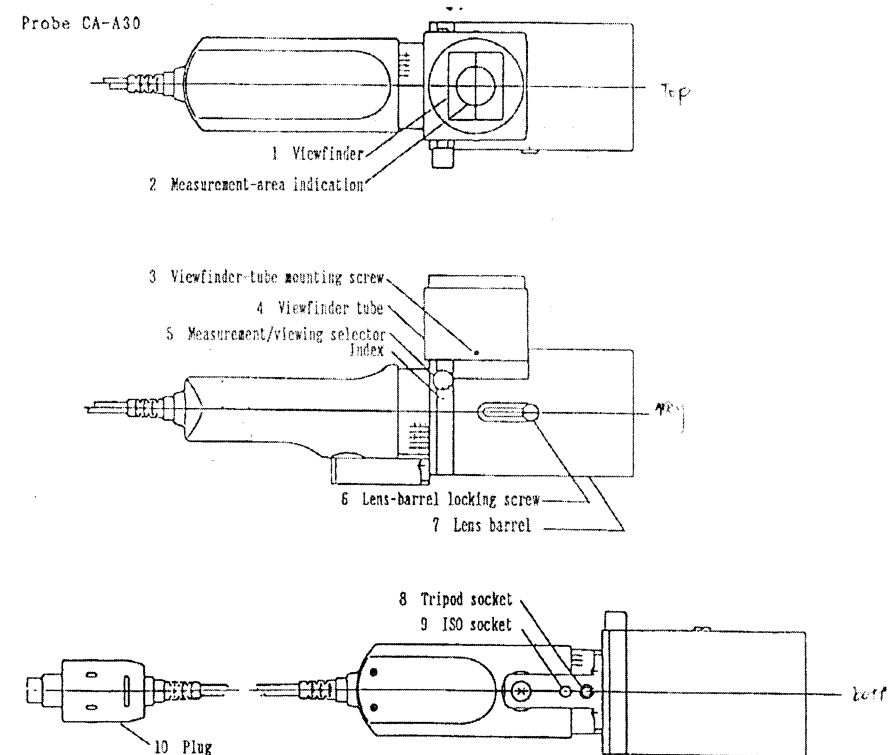
REAR SURFACE



Colour Adjustment

40 180MT10P LMT
 Go to cover page

Probe CA-A30



1. Viewfinder
Shows image seen by measuring probe.
2. Measurement-area indication
Indicates area to be measured.
3. Viewfinder-tube mounting screw
Removing these two screws (one on each side) allows the viewfinder tube to be removed to clean viewfinder, etc.
4. Viewfinder tube
Can be moved to minimize the effects of surrounding light and provide the best view of the viewfinder image.
5. Measurement/viewing selector
Moves internal mirror; set to \bigcirc for measurement and to \bullet for viewing or for zero calibration.
6. Lens-barrel locking screw
Locks lens barrel at a fixed position.
7. Lens barrel
Can be moved back and forth to set measurement angle.
8. Tripod socket
Can be used to mount measurement probe on a tripod. Depth: 6mm.
9. ISO socket
Can be used to mount measurement probe. ISO $\varnothing 5$ mm, depth: 6mm.
10. Plug
Used to connect measuring probe to main unit or optional Multi-Probe Expansion Board.

Colour adjustment

180MT10P LMT 41

Go to cover page

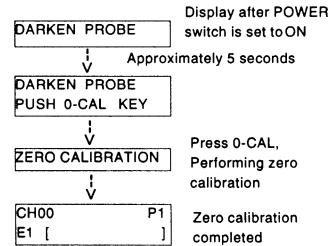
ZERO CALIBRATION

Zero calibration is performed to determine the output of the measuring probe when no light reaches the sensor and to set this as the zero point to which all other measurements are referenced. Zero calibration must be performed after the POWER switch has been set ON before taking any measurements.

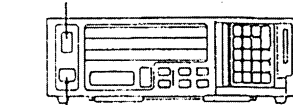
To perform zero calibration:

- Before performing zero calibration, check that the measuring probe has been connected to probe connector P1.

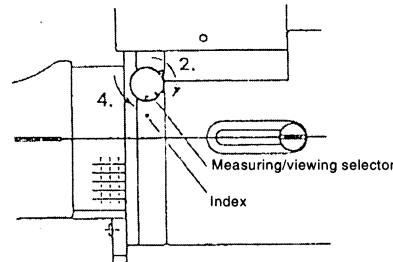
- Check that the POWER switch is set to ON.
- Set the measuring/viewing selector to the (viewing) position. (An image can be seen in the viewfinder, but no light will reach the sensor.)
- Press 0-CAL.
 - If zero calibration is being performed immediately after the POWER switch has been set to ON, press 0-CAL after "PUSH 0-CAL KEY" appears in the liquid crystal display.
- Set the measuring/viewing selector to the position. Measurements will be started immediately.



1. POWER switch



3. 0-CAL



- "E1" will appear in the liquid crystal display the first time the CA-110 is used after shipment because no standard color has been set.
- Zero calibration can be performed at any time, even if "PUSH 0-CAL KEY" is not shown in the liquid crystal display.

Note:

- If the luminance of the LCD to be measured is 5.00cd/m² (1.46 fL) or less, wait at least five minutes after setting POWER switch to ON before performing zero calibration. Also, when measuring LCDs of low luminance, zero calibration should be performed approximately once an hour to ensure accuracy.
- If the ambient temperature changes after zero calibration has been performed, perform zero calibration again.
- Do not press any key while zero calibration is being performed. If a key is pressed, the time required for zero calibration will become longer.

To check if zero calibration was performed correctly, place the receptor area of the probe face down on a flat surface so that no light reaches the receptor area.

If the display shown at right appears in the liquid crystal display, perform zero calibration again.

- Even when "OFFSET ERROR" appears in the liquid crystal display, if light reaches the receptor area of the measuring probe, measured values will appear in the digital and analog displays. However, these values will not be accurate.

OFFSET ERROR
PUSH 0-CAL KEY

If any other display is shown, zero calibration was performed correctly.

42 180MT10P LMT

Go to cover page

Colour Adjustment

SETTING MEASUREMENT AREA

Measurement areas of $\varnothing 25\text{mm}$ and $\varnothing 50\text{mm}$ can be selected by extending or retracting the lens barrel. The $\varnothing 25\text{mm}$ measurement area can be used for measuring LCDs with 2 -inch or greater diagonals; the $\varnothing 50\text{mm}$ measurement area can be used for measuring LCDs with 4 -inch or greater diagonals.

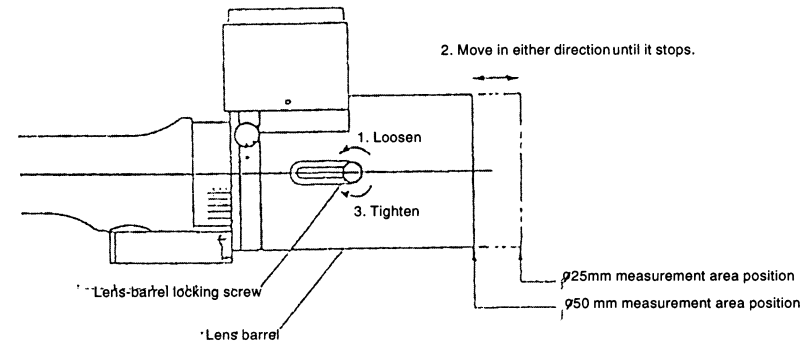
Set the measurement area :

Using a slotted screwdriver, loosen the lens - barrel locking screw.

Slide the lens barrel to the position corresponding to the desired measurement area. The lens barrel should be slid in the desired direction until it stops. Extending the lens barrel fully sets the $\varnothing 25\text{mm}$ measurement area; retracting the lens barrel fully sets the $\varnothing 50\text{mm}$ measurement area.

Use the screwdriver to tighten the lens - barrel locking screw and lock the lens barrel in position.

Changing the measurement area also changes the measurement angle, this may result in differences between values measured with the $\varnothing 25\text{mm}$ measurement area and those measured with the $\varnothing 50\text{mm}$ measurement area to the viewing - angle characteristics of the LCD. For this reason, it is recommended that the measurement area be constant for all measurements.



Colour adjustment

180MT10P LMT 43

Go to cover page

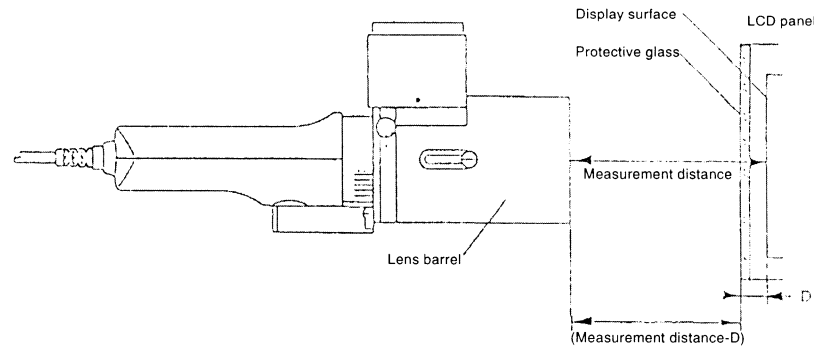
SETTING MEASUREMENT DISTANCE

The measurement distance (the distance from the front of the measuring probe's lens barrel to the display surface of the LCD) should be set using a ruler according to the procedure below.

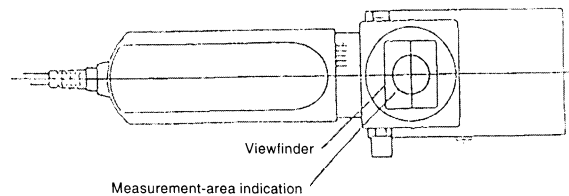
1. Mount the measuring probe on a tripod or other stand and mount the LCD on a suitable stand.
2. While using a ruler to measure the distance from the front of the measuring probe's lens barrel to the LCD's display surface, move the measuring probe or the LCD until the distance is the correct distance for the measurement area in use.

measurement area	Ø 25mm	Ø 50mm
measurement distance*	135mm+/-5mm	210mm+/-10mm

* Distance from the tip of the measuring probe's lens barrel to the LCD's display surface.



3. While looking through the viewfinder, move the measuring probe or LCD until the LCD section to be measured is inside the measurement-area indication in the viewfinder.



44 180MT10P LMT

Go to cover page

White Balance Adjustment

Alignment procedure

1. Turn on 180MT LCD/TV monitor.
2. Turn on the Timing/Pattern generator. See Fig. 1
Setting generator to provide CROSS-Hatch pattern at
Resolution : 1024 x 768
Timing : H= 48 KHz
V= 60 Hz
3. Preset LCD colour Analyzer CA-110
- Remove the lens protective cover of probe CA-A30.
- Set Measuring/viewing selector to Measuring position for reset analyzer. (Zero calibration) as Fig. 2
- Turn on the colour analyzer (CA-110).
- Press 0-CAL button to starting reset analyzer. See Fig. 3



Fig. 1

Fig. 2

0-CAL

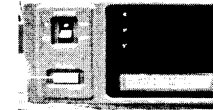
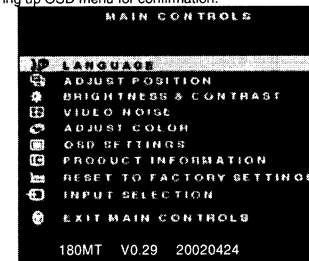


Fig. 3

4. Entering factory adjustment mode of LCD/TV Monitor.
- To hold OK and AUTO buttons then power on the monitor. Press OK to bring up OSD menu for confirmation.



Factory mode

Note : after alignment, please reset OSD to user's mode for normal operation. Otherwise, the monitor won't enter power saving mode and showing full white picture all the time as no video signal supplied. To leave factory mode by restart the monitor.

5. Adjust OSD menu to lower position of screen (i.g. adjust V-position to value "0" at submenu of OSD Setting.
6. Setting Brightness and Contrast
- Adjust Brightness to value "70".
- Adjust Contrast to value "50".



7. Switch light probe to Viewing position.
8. Move the lens barrel forward or backward to get clear image as shown in Fig. 4
9. Switch light probe to Measuring position. It should be able to indicate colour value on the CA-110.

Colour Adjustment

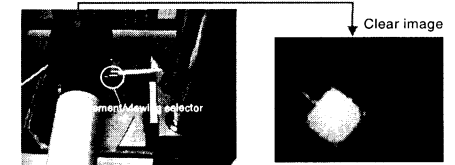
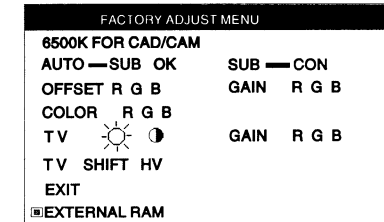


Fig. 4

10. Setting pattern to full white picture.
11. Press OK then select LCD TV V1.28 20011030 by button.
12. Press OK to bring up submenu as following windows.



9300° K

13. Press ▲ or ▼ buttons to select R G B. Increase/decrease value by press + or - buttons until the X, Y co-ordinates as below:
x= 0.281 ± 0.005
y= 0.311 ± 0.005
Y>= 250 nits

6500° K

14. Setting X, Y value listed as below:
X= 0.312 ± 0.005
Y= 0.338 ± 0.005
Y>= 250 nits

Alignment hits: 1. R for x value, G for y value, B for Y value on the colour analyzer.

2. If the colour analyzer has been calibrated and preset colour temperature in it. Please switch to correct setting in accordance with colour settings.

15. Gray scale checking
- Switch Timing/pattern generator to
Pattern: 32 gray scale
Timing: 1024 X 768 60Hz 48KHz
- Setting both Brightness and Contrast to 50 (Value).
- Check black and white scale are visible clearly across the screen.
See Fig. 1

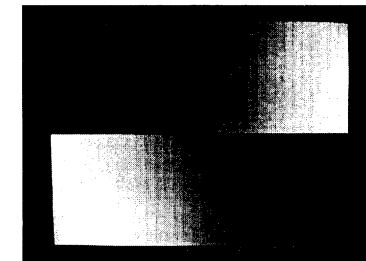
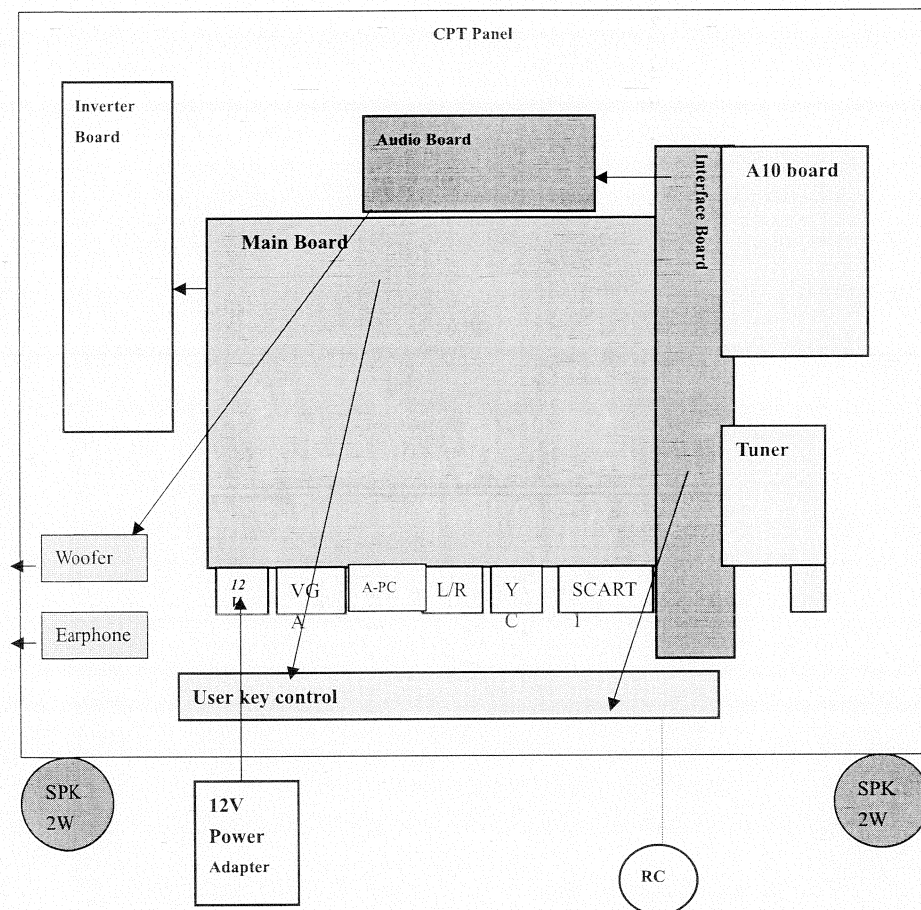


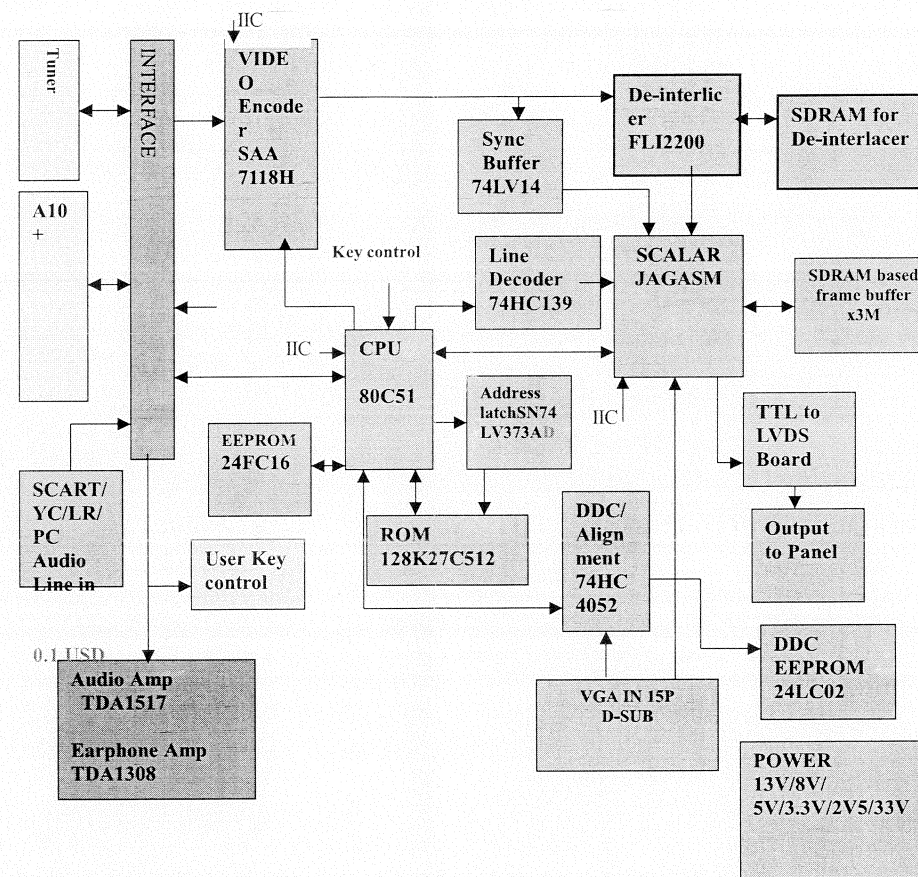
Fig. 1

Note: The bright scale will be saturated, if Y is too large. The dark scale will be invisible, if Y is too small. Re-alignment or review procedure again to correct this.

Architecture of Multi-function TV-Monitor

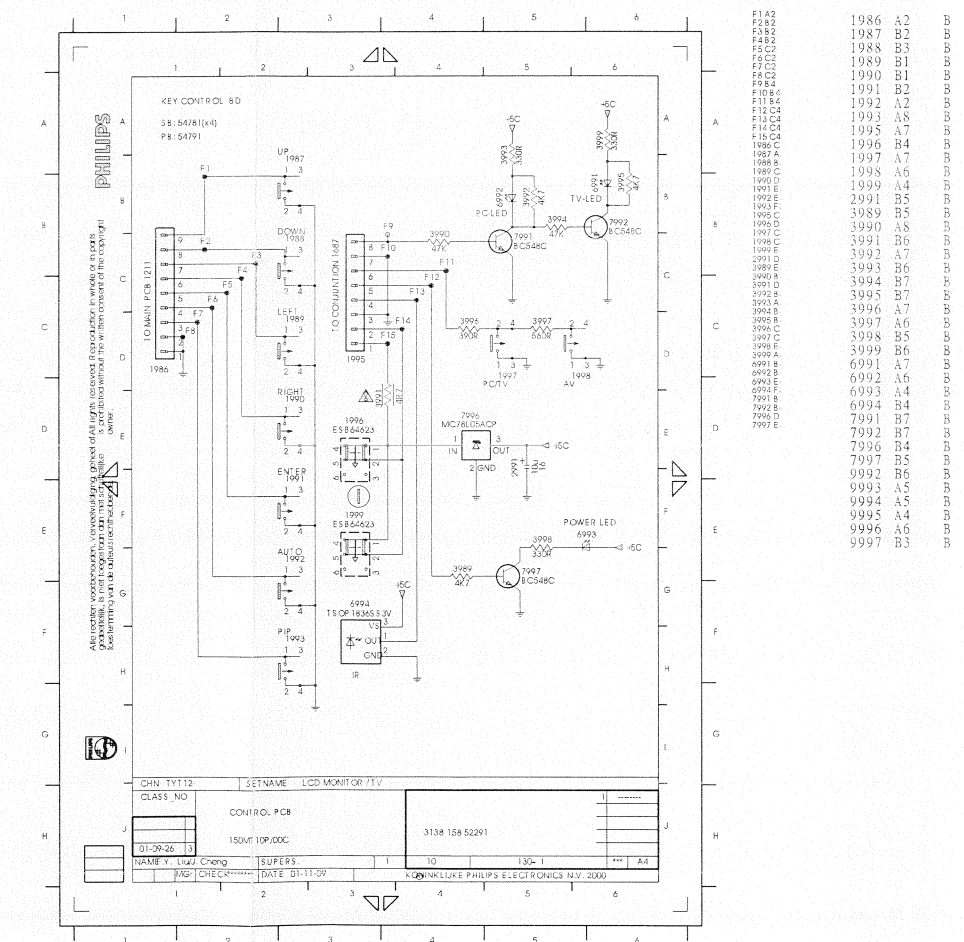
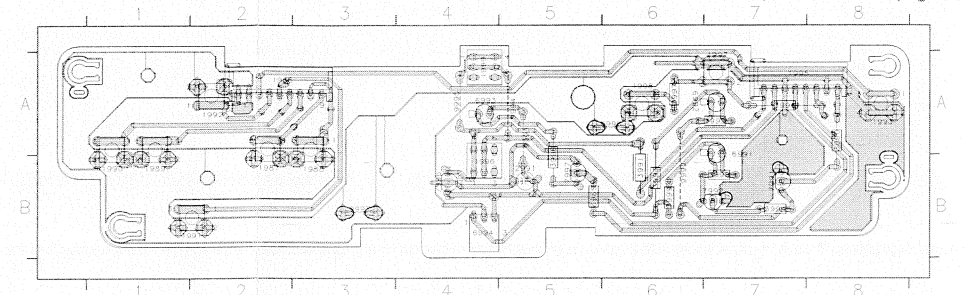


Multi-function TV-MONITOR FUNCTION BLOCK(W/ PIP)
--Base on A10+ & Sag scalar JAGASM



180MT10P LMT	45
---------------------	-----------

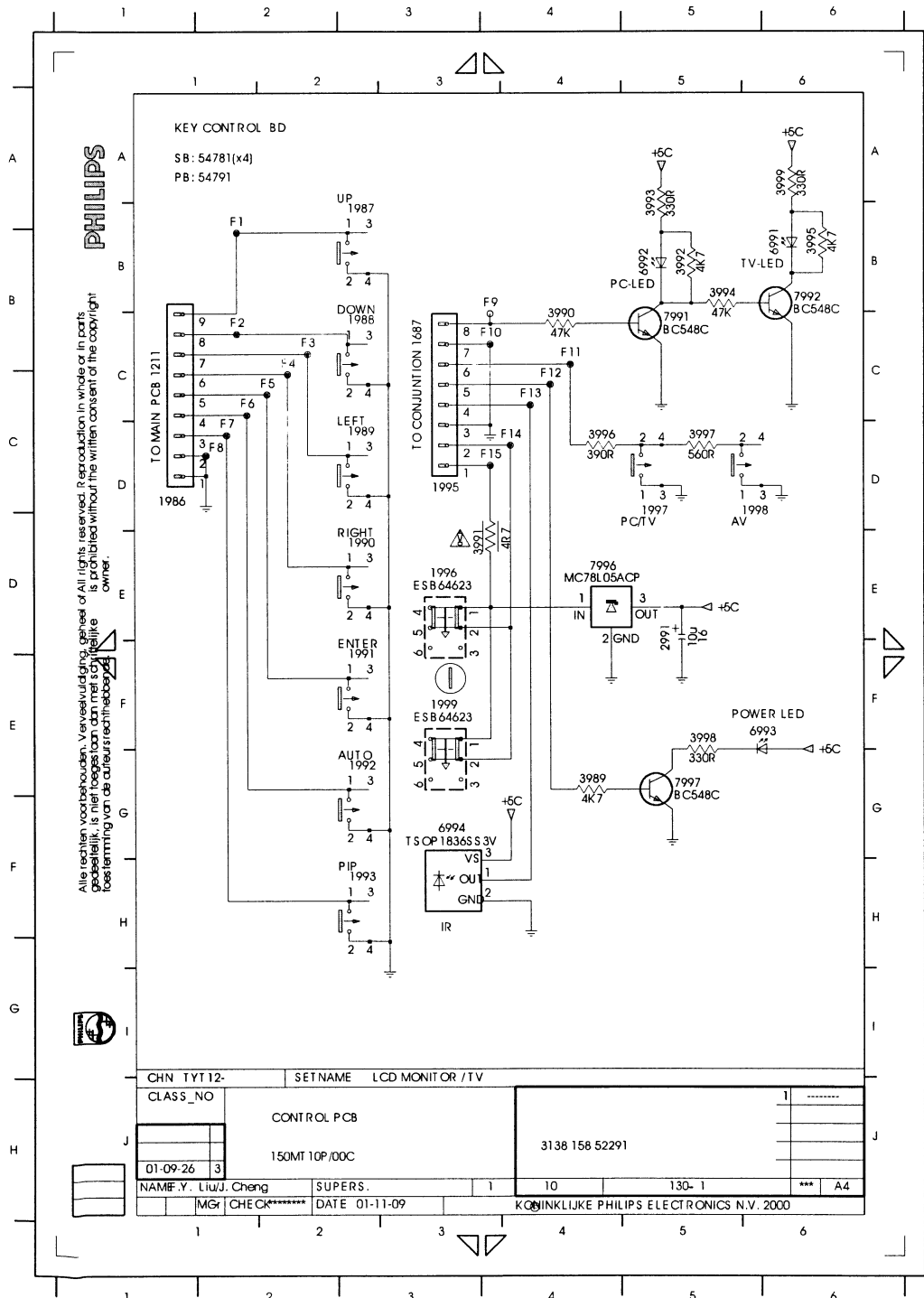
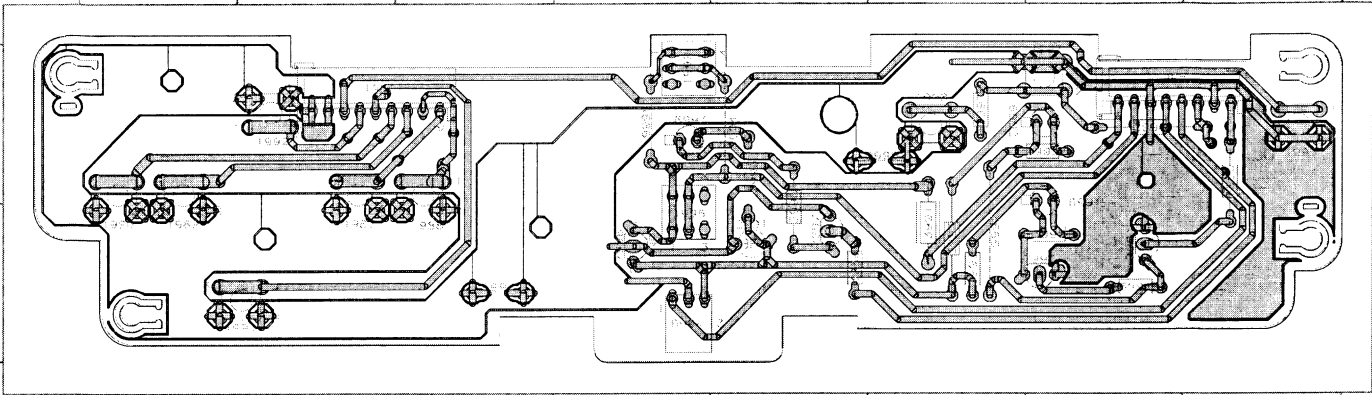
Go to cover page



Control Panel Diagram and C.B.A.

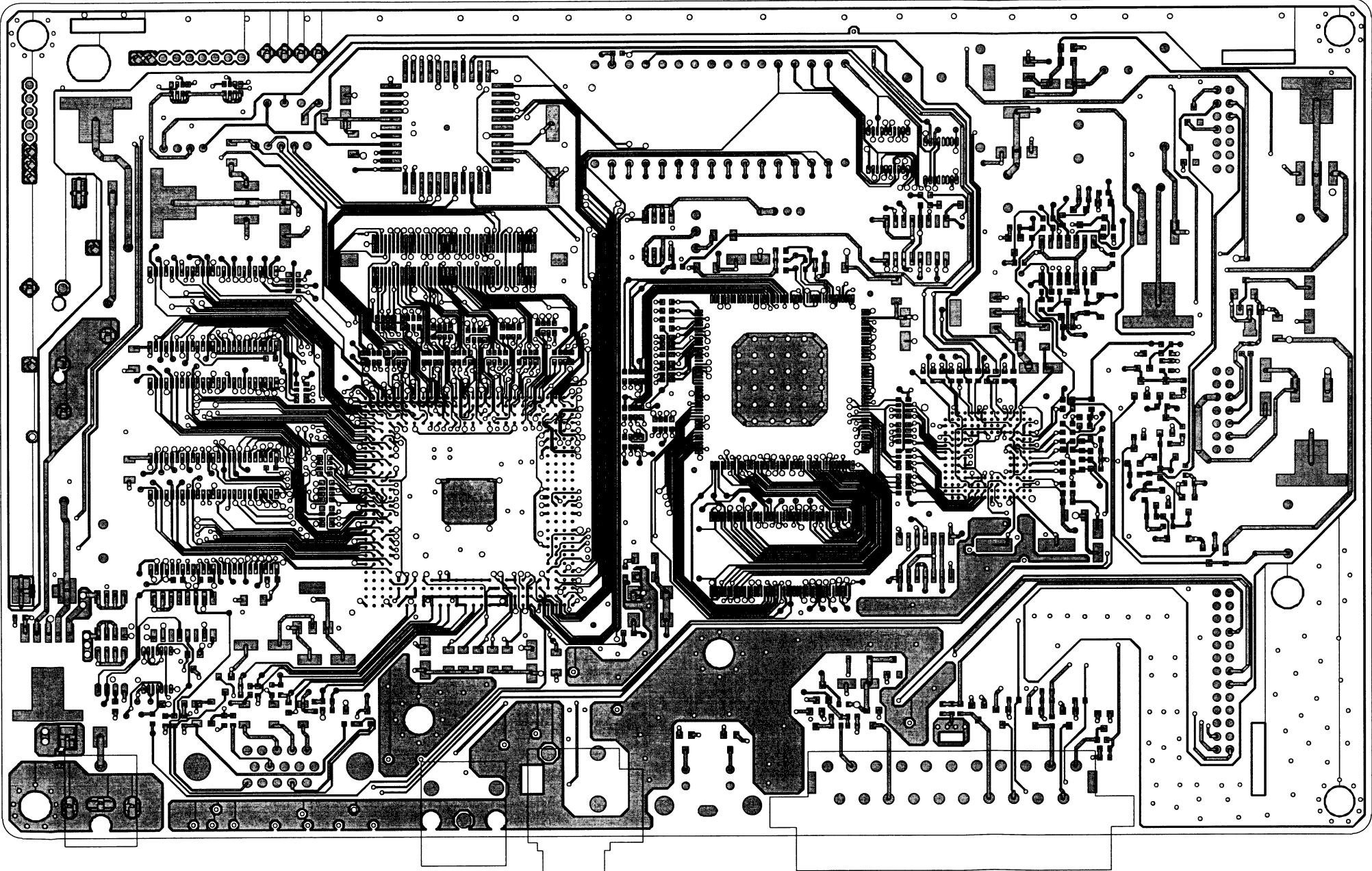
180MT10P LMT

Go to cover page



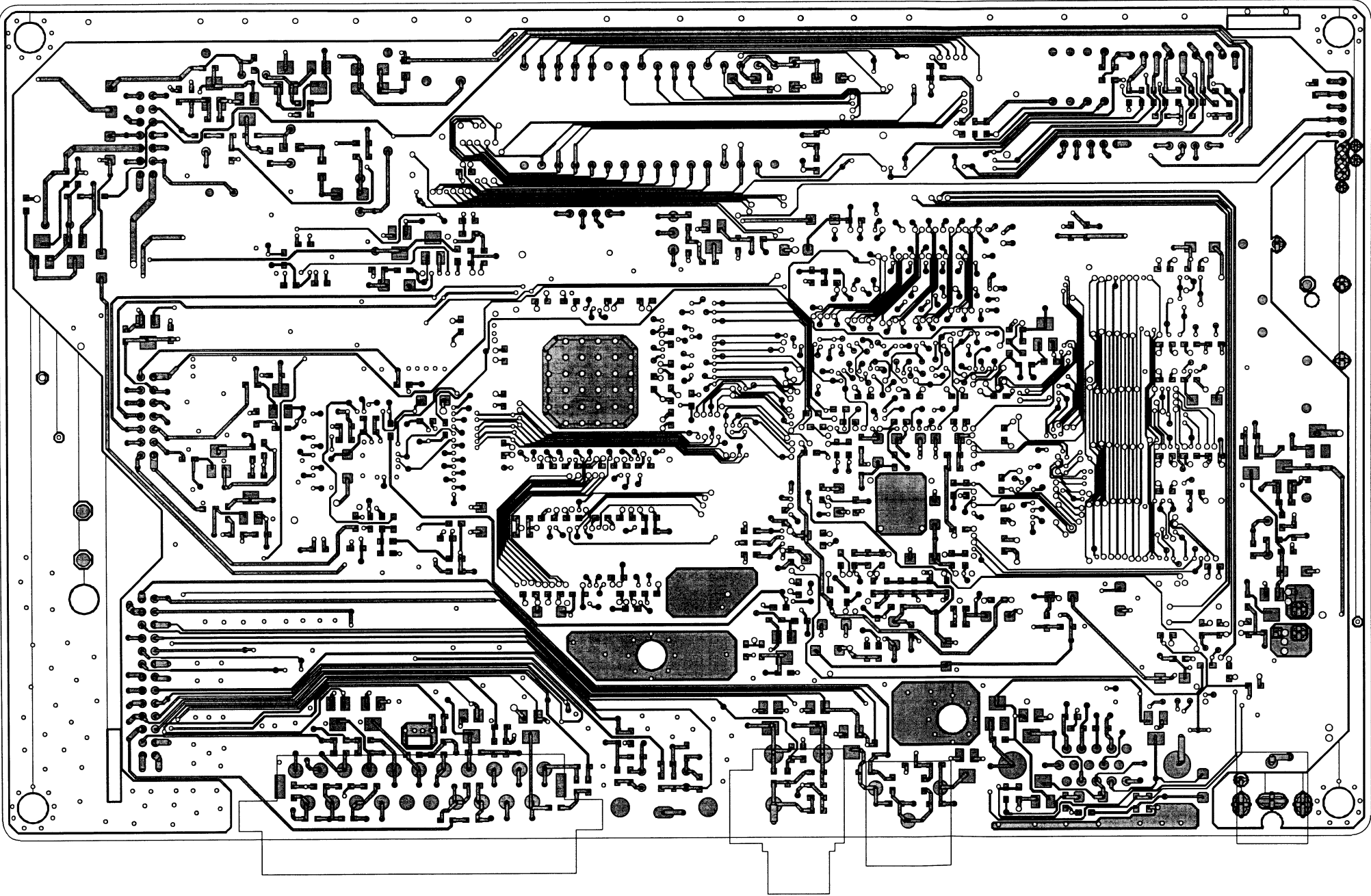
F1A2	1986	A2	B
F2B2	1987	B2	B
F3B2	1988	B3	B
F4B2	1989	B1	B
F5C2	1990	B1	B
F6C2	1991	B2	B
F7C2	1992	A2	B
F8C2	1993	A8	B
F9B4	1995	A7	B
F10B4	1996	B4	B
F11B4	1997	A7	B
F12C4	1998	A6	B
F13C4	1999	A4	B
F14C4	2001	B5	B
F15C4	1995	B5	B
1986C	1996	A8	B
1987A	1997	A7	B
1988B	1998	A6	B
1989C	1999	A4	B
1990D	2001	B5	B
1991E	1995	B5	B
1992E	1996	A8	B
1993F	1997	C	B
1995C	1998	A6	B
1996D	1999	A4	B
1997C	2001	B5	B
1998C	1995	B5	B
1999E	1996	A8	B
2001D	1997	C	B
3989E	1998	A6	B
3990B	1999	A4	B
3991D	2001	B5	B
3992B	1995	B5	B
3993A	1996	A8	B
3994B	1997	C	B
3995B	1998	A6	B
3996C	1999	A4	B
3997C	2001	B5	B
3998E	1995	B5	B
3999A	1996	A8	B
6991B	1997	C	B
6992B	1998	A6	B
6993E	1999	A4	B
6994F	2001	B5	B
7991B	1995	B5	B
7992B	1996	A8	B
7996D	1997	C	B
7997E	1998	A6	B
	1999	A4	B
	2001	B5	B

Scaler Board C.B.A.



2007 B4 A	2453 B2 A	3317 B4 A	5363 B4 A	1001 B1 B
2015 B4 A	2457 A2 A	3318 B3 A	5373 A3 A	1003 A3 B
2016 B4 A	2458 A2 A	3319 B4 A	5375 A3 A	1011 A3 B
2018 A2 A	2459 A2 A	3321 B4 A	5422 A2 A	1021 A4 B
2019 A1 A	2461 A2 A	3322 B4 A	5423 A1 A	1201 A1 B
2024 A1 A	2462 A2 A	3323 B4 A	5471 B2 A	1203 A1 B
2025 A1 A	2463 A2 A	3325 B4 A	5611 B1 A	1211 A1 B
2028 A1 A	2465 A2 A	3326 B4 A	5612 B2 A	1301 B1 B
2031 A2 A	2466 A2 A	3327 B3 A	5613 B2 A	1351 A1 B
2032 A2 A	2467 A2 A	3328 B3 A	5616 B2 A	1406 A4 B
2033 A1 A	2472 A2 A	3331 B3 A	5631 B2 A	1601 B3 B
2034 A1 A	2473 A2 A	3332 A3 A	5632 B2 A	1631 B3 B
2035 A1 A	2474 A2 A	3333 B3 A	6001 A4 A	1632 B2 B
2036 A1 A	2475 A2 A	3341 A3 A	6019 A1 A	1633 B2 B
2052 B4 A	2476 A2 A	3342 A3 A	6020 A1 A	1635 B4 B
2057 B4 A	2477 A2 A	3343 A3 A	6021 A1 A	2006 B1 B
2201 A3 A	2478 B2 A	3345 A3 A	6025 A2 A	2008 A1 B
2202 A3 A	2479 B2 A	3346 B3 A	6028 A1 A	2009 A1 B
2205 A3 A	2481 B2 A	3355 A3 A	6311 B3 A	2017 A1 B
2206 A2 A	2482 B2 A	3357 B3 A	6312 B3 A	2020 A3 B
2207 A3 A	2483 B2 A	3358 B3 A	6313 B4 A	2021 A4 B
2211 A4 A	2485 B2 A	3359 B3 A	6316 B3 A	2026 A4 B
2212 A4 A	2486 B2 A	3361 B3 A	6606 B1 A	2027 A4 B
2213 A4 A	2487 B2 A	3362 B3 A	6607 B1 A	2030 A4 B
2215 A4 A	2488 B2 A	3363 A3 A	6608 B2 A	2417 B4 B
2216 A4 A	2489 B2 A	3365 A4 A	6611 B2 A	3023 A3 B
2217 A4 A	2491 B2 A	3366 A3 A	6633 B3 A	3040 A4 B
2218 A4 A	2492 B2 A	3367 A3 A	6635 B3 A	5005 A1 B
2306 B4 A	2602 B1 A	3368 B3 A	6637 B3 A	5007 A1 B
2311 B3 A	2605 B1 A	3371 A3 A	7006 A4 A	5022 A4 B
2312 B4 A	2606 B1 A	3372 B3 A	7012 B4 A	7202 A1 B
2316 B3 A	2608 B2 A	3376 B3 A	7013 A4 A	7203 A3 B
2320 A3 A	2609 B2 A	3378 B3 A	7018 A2 A	
2321 B4 A	2611 B2 A	3379 B3 A	7019 A1 A	
2322 B4 A	2615 B2 A	3381 B3 A	7020 A1 A	
2323 B4 A	2616 B1 A	3394 A3 A	7023 A1 A	
2324 A3 A	2617 B1 A	3395 A3 A	7024 A1 A	
2325 A3 A	2631 B2 A	3396 A3 A	7028 A1 A	
2328 B3 A	2632 B2 A	3401 A2 A	7032 A2 A	
2329 A4 A	2633 B2 A	3414 A2 A	7033 A2 A	
2330 B3 A	2634 B3 A	3415 A1 A	7041 A1 A	
2331 A3 A	2635 B2 A	3416 B1 A	7042 A1 A	
2332 A3 A	2636 B3 A	3417 A1 A	7351 B3 A	
2333 B3 A	2637 B3 A	3419 A1 A	7352 A4 A	
2334 B3 A	2638 B3 A	3420 A1 A	7411 A1 A	
2335 A3 A	2641 B3 A	3421 A2 A	7412 A1 A	
2336 A3 A	2642 B3 A	3422 B1 A	7413 A1 A	
2337 A3 A	2643 B3 A	3424 B1 A		
2338 A3 A	2644 B3 A	3425 B1 A		
2339 A3 A	2645 B3 A	3426 B1 A		
2341 B3 A	3007 A4 A	3427 B1 A		
2342 B3 A	3008 B4 A	3430 A2 A		
2343 B3 A	3009 A4 A	3434 B2 A		
2345 B3 A	3010 A4 A	3436 B1 A		
2346 B3 A	3011 B4 A	3440 B2 A		
2348 B3 A	3012 B4 A	3453 A1 A		
2351 B3 A	3013 B4 A	3454 B2 A		
2352 B3 A	3014 B4 A	3455 A1 A		
2354 B3 A	3015 B4 A	3456 A1 A		
2355 B3 A	3016 A2 A	3460 B2 A		
2358 B3 A	3017 A3 A	3463 A2 A		
2360 B3 A	3018 A4 A	3471 B2 A		
2361 B3 A	3018 A3 A	3472 B2 A		
2362 B3 A	3020 A1 A	3473 B2 A		
2363 B3 A	3021 A1 A	3603 B1 A		
2364 B3 A	3022 A1 A	3608 B1 A		
2365 B3 A	3024 A1 A	3611 B1 A		
2366 A3 A	3025 A1 A	3612 B1 A		
2367 A3 A	3026 A1 A	3616 B2 A		
2368 A3 A	3027 A1 A	3617 B2 A		
2369 A3 A	3028 A1 A	3618 B2 A		
2370 A3 A	3029 A1 A	3619 B2 A		
2371 A3 A	3030 A1 A	3621 B2 A		
2372 B3 A	3031 A2 A	3622 B2 A		
2373 B3 A	3032 A2 A	3627 B2 A		
2374 B3 A	3033 A2 A	3628 B2 A		
2375 A3 A	3034 A1 A	3631 B2 A		
2376 A4 A	3035 A1 A	3632 B2 A		
2377 A4 A	3036 A2 A	3633 B2 A		
2378 A4 A	3037 A2 A	3635 B2 A		
2379 A4 A	3038 A1 A	3636 B3 A		
2381 A4 A	3041 A1 A	3637 B3 A		
2382 A4 A	3042 A1 A	3638 B3 A		
2383 A4 A	3043 A1 A	3639 B3 A		
2384 A4 A	3045 A1 A	3641 B3 A		
2385 A4 A	3046 A2 A	3642 B3 A		
2386 A4 A	3048 A1 A	3643 B3 A		
2388 A4 A	3049 A1 A	3645 B3 A		
2389 A4 A	3050 A1 A	5001 B4 A		
2391 B4 A	3051 A4 A	5020 A1 A		
2395 A4 A	3052 A4 A	5021 A1 A		
2396 A4 A	3075 A1 A	5052 B3 A		
2397 A3 A	3201 A3 A	5053 B3 A		
2421 B1 A	3202 A3 A	5055 B4 A		
2422 B1 A	3203 A3 A	5203 A3 A		
2431 A1 A	3205 A3 A	5205 A3 A		
2432 A1 A	3206 A3 A	5311 B4 A		
2435 A1 A	3213 A4 A	5312 B4 A		
2436 A1 A	3215 A4 A	5321 A3 A		
2438 B2 A				
2441 B1 A				

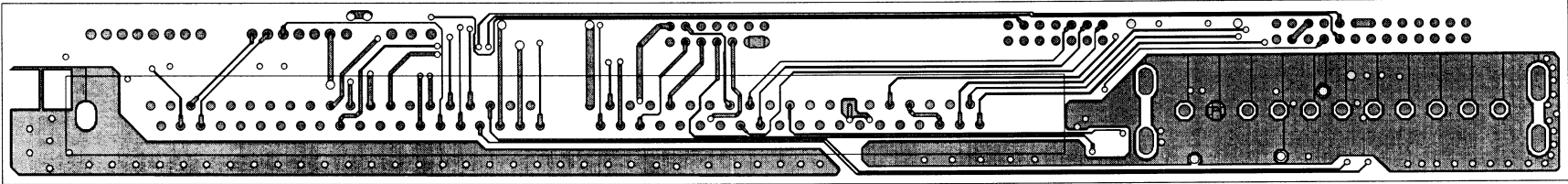
Scaler Board (C.B.A)



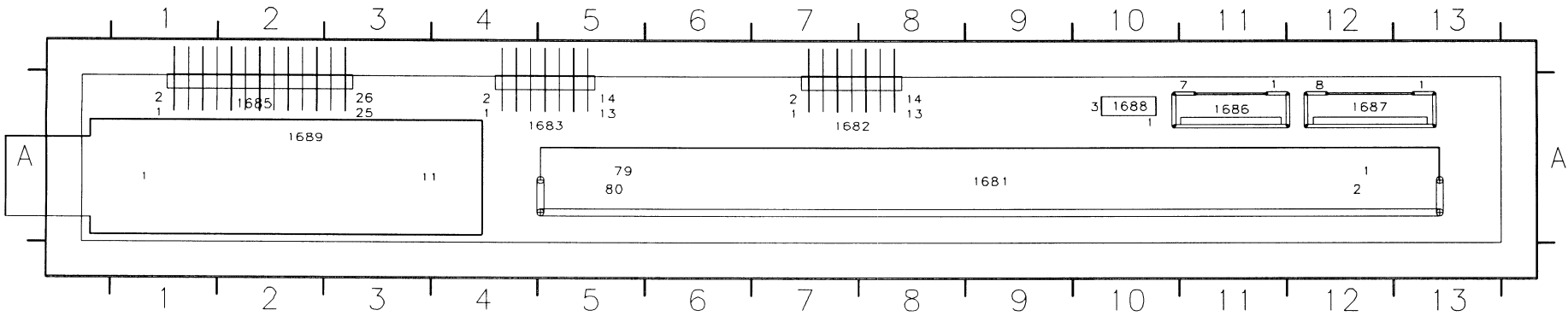
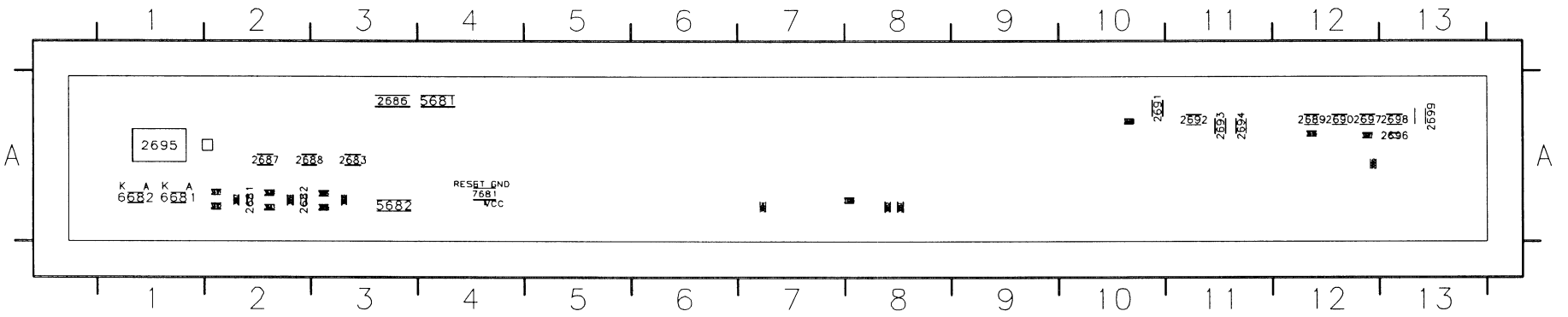
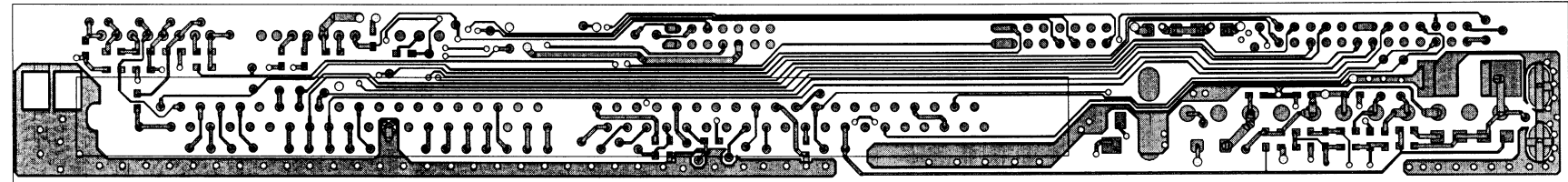
Hmc.map

1002 B1	B	3212 A1	B	3613 B3	B	1001 B4	B
1202 B1	B	3302 B1	B	3615 B3	B	1003 A2	B
1331 B2	B	3303 B1	B	3623 B3	B	1011 A2	B
1371 A2	B	3304 B1	B	3625 B3	B	1021 A1	B
1401 B4	B	3306 B1	B	3626 B3	B	1201 A4	B
2001 B1	B	3307 B1	B	5026 A4	B	1203 A4	B
2014 A4	B	3308 B1	B	5051 A1	B	1211 A4	B
2022 A4	B	3310 B1	B	5056 A3	B	1301 B4	B
2023 A4	B	3311 B1	B	5201 A2	B	1351 A4	B
2029 A3	B	3312 B1	B	5202 A1	B	1406 A1	B
2037 A4	B	3313 B1	B	5301 B1	B	1601 B2	B
2038 A4	B	3315 B2	B	5303 B1	B	1631 B2	B
2051 A1	B	3316 B2	B	5306 B1	B	1632 B3	B
2053 B1	B	3320 B1	B	5331 B2	B	1633 B3	B
2055 B2	B	3329 B1	B	5338 B1	B	1635 B1	B
2056 B2	B	3338 B2	B	5361 A1	B	2006 B4	B
2058 B1	B	3351 A1	B	5421 B4	B	2008 A4	B
2203 A2	B	3352 A1	B	5426 A4	B	2009 A4	B
2301 B1	B	3353 B1	B	5451 A3	B	2017 A4	B
2302 B1	B	3355 A1	B	5456 A3	B	2020 A2	B
2303 B1	B	3369 A2	B	5457 A3	B	2021 A1	B
2305 B1	B	3382 A2	B	5615 B3	B	2026 A1	B
2326 B2	B	3383 A2	B	6006 B1	B	2027 A1	B
2327 B2	B	3384 A2	B	6022 A4	B	2030 A1	B
2347 B2	B	3385 A2	B	6023 A4	B	2417 B1	B
2349 B2	B	3386 A2	B	6026 A3	B	3023 A1	B
2353 B2	B	3387 A2	B	6027 A4	B	3040 A1	B
2355 B2	B	3388 A2	B	6031 A4	B	5005 A4	B
2357 B2	B	3389 A2	B	6301 B1	B	5007 A4	B
2359 B2	B	3390 A2	B	6302 B1	B	5022 A1	B
2380 A1	B	3391 A2	B	6315 B1	B	7202 A4	B
2387 A1	B	3392 A2	B	6317 B2	B	7203 A2	B
2390 B1	B	3393 A2	B	6411 A4	B		
2392 B1	B	3402 A3	B	6412 B4	B		
2393 B1	B	3404 A4	B	6601 B4	B		
2394 B1	B	3405 A4	B	6602 B4	B		
2401 A4	B	3406 A4	B	6603 B4	B		
2402 A4	B	3407 A4	B	6604 B3	B		
2403 A4	B	3408 A4	B	6605 B4	B		
2405 A4	B	3409 A4	B	6609 B3	B		
2406 A4	B	3410 B4	B	6610 B3	B		
2407 A4	B	3411 A4	B	6612 B3	B		
2408 A4	B	3412 A4	B	6613 B3	B		
2409 A4	B	3413 A4	B	6632 B3	B		
2411 A4	B	3422 A3	B	7005 B1	B		
2412 A4	B	3423 A3	B	7011 B1	B		
2413 A4	B	3428 A4	B	7016 A1	B		
2414 A4	B	3429 A4	B	7017 A3	B		
2415 A4	B	3431 A3	B	7021 A4	B		
2416 A4	B	3432 A3	B	7022 A4	B		
2418 B4	B	3433 A3	B	7025 A4	B		
2419 A4	B	3435 A3	B	7026 A4	B		
2426 A4	B	3437 A4	B	7027 A4	B		
2427 A4	B	3438 A4	B	7030 A4	B		
2428 A3	B	3439 A4	B	7031 A3	B		
2429 A3	B	3441 A4	B	7035 A4	B		
2433 B4	B	3442 A4	B	7036 A4	B		
2434 B3	B	3443 A3	B	7037 A4	B		
2437 A4	B	3444 A3	B	7038 A4	B		
2438 A4	B	3445 B4	B	7039 A4	B		
2452 A3	B	3446 A4	B	7051 A1	B		
2456 A3	B	3447 A4	B	7052 B1	B		
2601 B4	B	3448 A4	B	7201 A2	B		
2603 B4	B	3449 A4	B	7205 A3	B		
2607 B3	B	3451 A2	B	7206 A3	B		
2612 B3	B	3452 A3	B	7301 B1	B		
2613 B3	B	3457 A3	B	7321 B1	B		
3006 B1	B	3458 A2	B	7322 B1	B		
3035 A3	B	3459 A2	B	7323 B1	B		
3038 A3	B	3461 A3	B	7331 A2	B		
3044 A4	B	3462 A3	B	7361 A1	B		
3056 A4	B	3465 A3	B	7362 A1	B		
3057 A4	B	3466 A3	B	7363 B1	B		
3058 A4	B	3467 A3	B	7401 A4	B		
3059 A4	B	3468 A3	B	7402 A4	B		
3060 A4	B	3469 A3	B	7403 A4	B		
3061 A4	B	3470 A3	B	7405 A4	B		
3062 A4	B	3474 A3	B	7406 B4	B		
3063 A4	B	3475 A3	B	7407 A4	B		
3065 A4	B	3476 A4	B	7408 A4	B		
3066 A4	B	3477 A4	B	7409 A4	B		
3067 A4	B	3481 A4	B	7410 B3	B		
3068 A4	B	3482 A4	B	7415 A4	B		
3069 A4	B	3601 B4	B	7431 A3	B		
3070 A4	B	3602 B4	B	7451 A3	B		
3071 A4	B	3605 B4	B	7471 B3	B		
3072 A4	B	3606 B4	B	7621 B3	B		
3073 A4	B	3607 B4	B				
3207 A2	B	3609 B4	B				
3211 A1	B						
3212 A1	B						

Conjunction Diagram



1681	A5	B
1682	A7	B
1683	A9	B
1685	A12	B
1686	A3	B
1687	A2	B
1688	A4	B
1689	A12	B
1681	A9	B
1682	A7	B
1683	A5	B
1685	A2	B
1686	A11	B
1687	A12	B
1688	A10	B
1689	A2	B
2681	A2	A
2682	A2	A
2683	A3	A
2686	A3	A
2687	A2	A
2688	A2	A
2689	A12	A
2690	A12	A
2691	A10	A
2692	A11	A
2693	A11	A
2694	A11	A
2695	A1	A
2696	A13	A
2697	A12	A
2698	A13	A
2699	A13	A
3681	A8	A
3682	A8	A
3683	A2	A
3684	A2	A
3685	A3	A
3686	A3	A
3687	A2	A
3688	A2	A
3689	A8	A
3690	A3	A
3691	A2	A
3692	A2	A
3694	A7	A
3695	A12	A
3696	A12	A
3697	A12	A
3698	A10	A
5681	A4	A
5682	A3	A
6681	A1	A
6682	A1	A
7681	A4	A

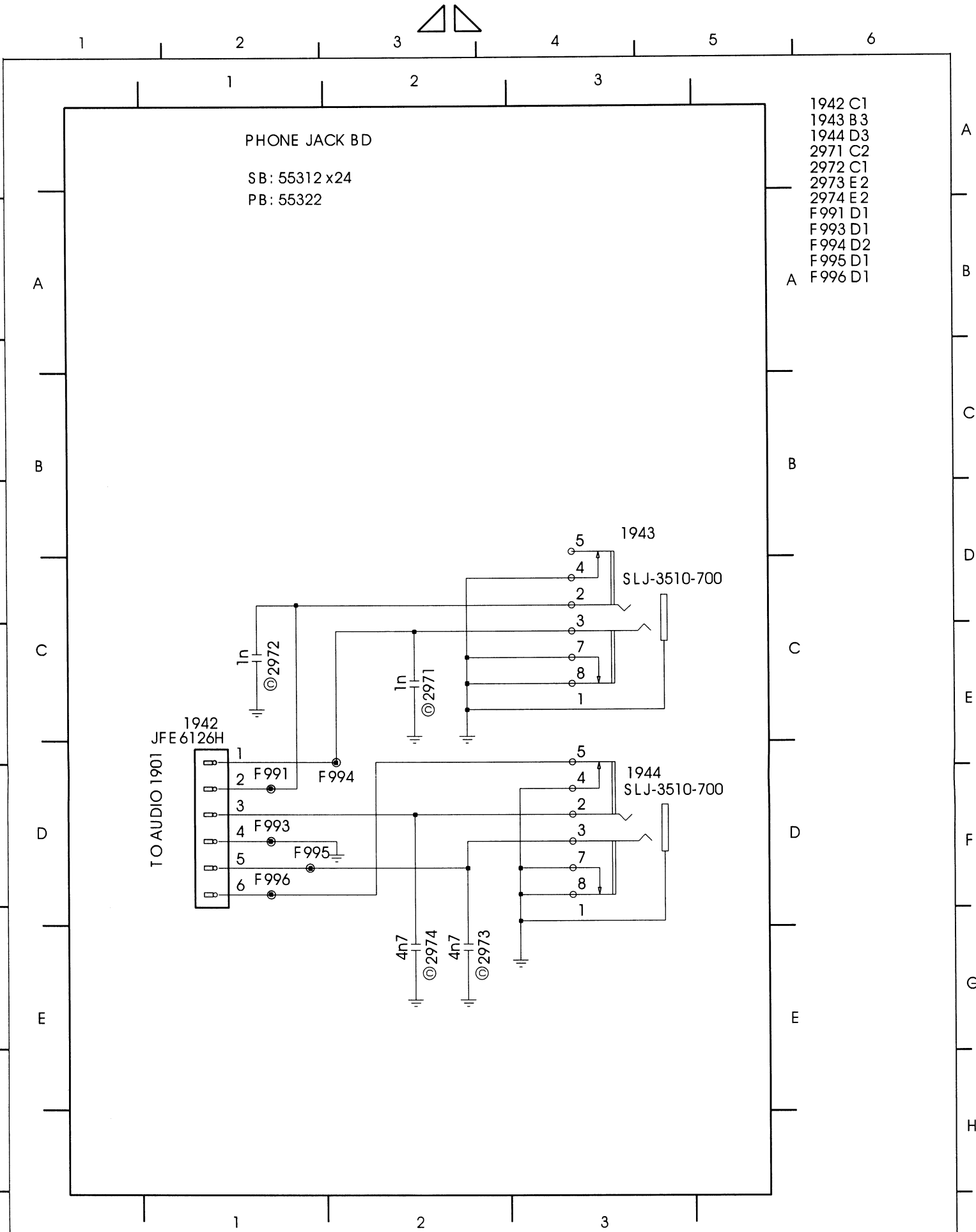


Phone Jack PCB

- 1681 A5 B
- 1682 A7 B
- 1683 A9 B
- 1685 A12 B
- 1686 A3 B
- 1687 A2 B
- 1688 A4 B
- 1689 A12 B
- 1681 A9 B
- 1682 A7 B
- 1683 A5 B
- 1685 A2 B
- 1686 A11 B
- 1687 A12 B
- 1688 A10 B
- 1689 A2 B
- 2681 A2 A
- 2682 A2 A
- 2683 A3 A
- 2686 A3 A
- 2687 A2 A
- 2688 A2 A
- 2689 A12 A
- 2690 A12 A
- 2691 A10 A
- 2692 A11 A
- 2693 A11 A
- 2694 A11 A
- 2695 A1 A
- 2696 A13 A
- 2697 A12 A
- 2698 A13 A
- 2699 A13 A
- 3681 A8 A
- 3682 A8 A
- 3683 A2 A
- 3684 A2 A
- 3685 A3 A
- 3686 A3 A
- 3687 A2 A
- 3688 A2 A
- 3689 A8 A
- 3690 A3 A
- 3691 A2 A
- 3692 A2 A
- 3694 A7 A
- 3695 A12 A
- 3696 A12 A
- 3697 A12 A
- 3698 A10 A
- 5681 A4 A
- 5682 A3 A
- 6681 A1 A
- 6682 A1 A
- 7681 A4 A

PHILIPS

Alle rechten voorbehouden. Vervolmaking, geheel of in parts gedeeltelijk, is niet toegestaan dan met schriftelijke toestemming van de auteursrechtbehebber.

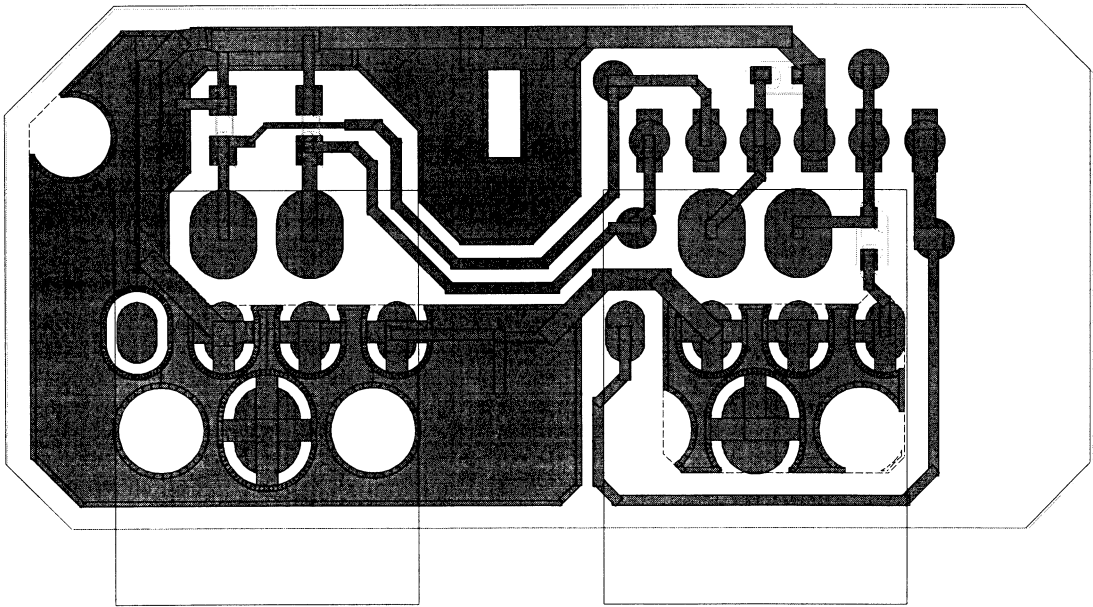
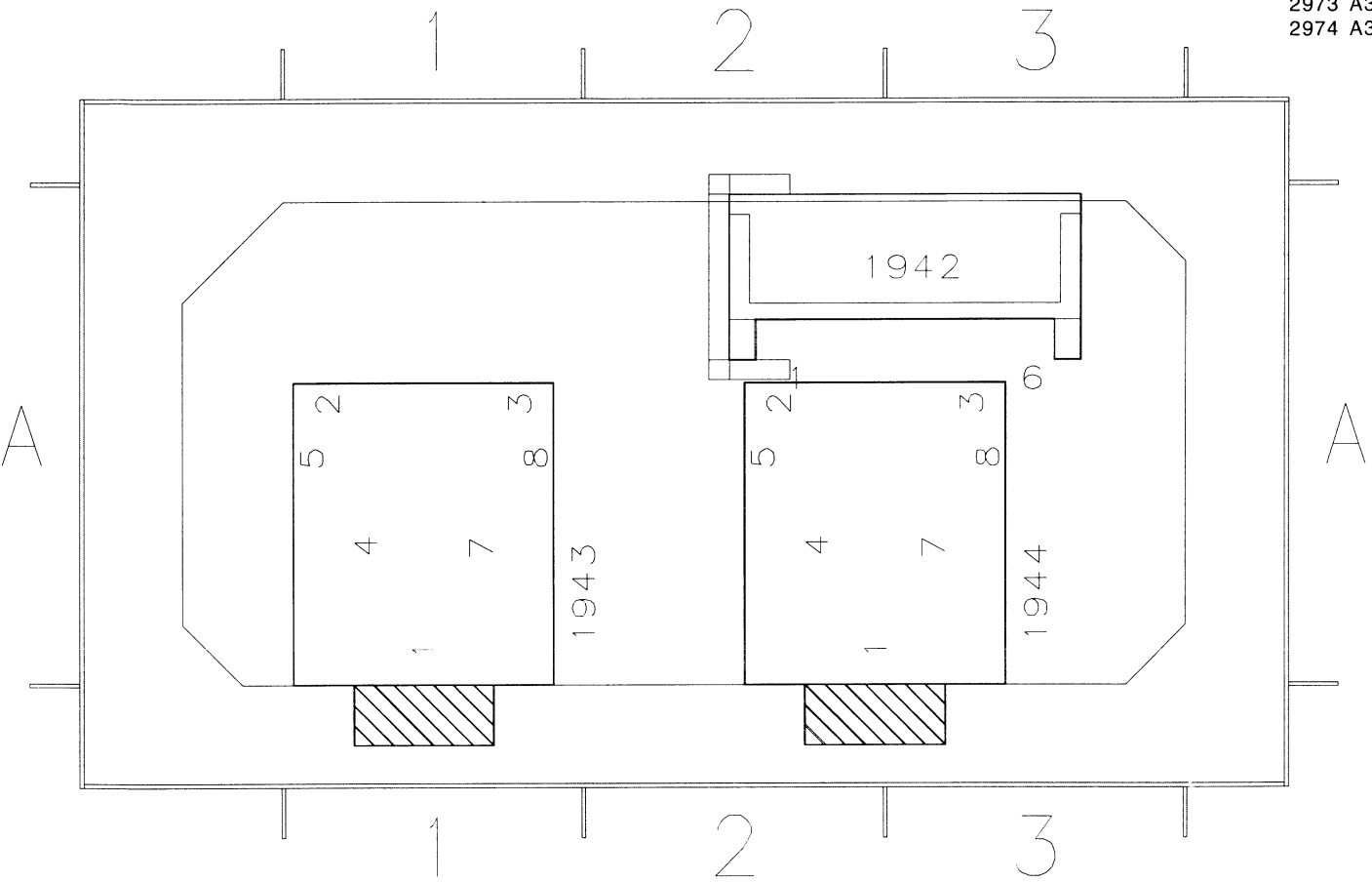


NOTES:
© STAND FOR CHIP COMPONENTS.

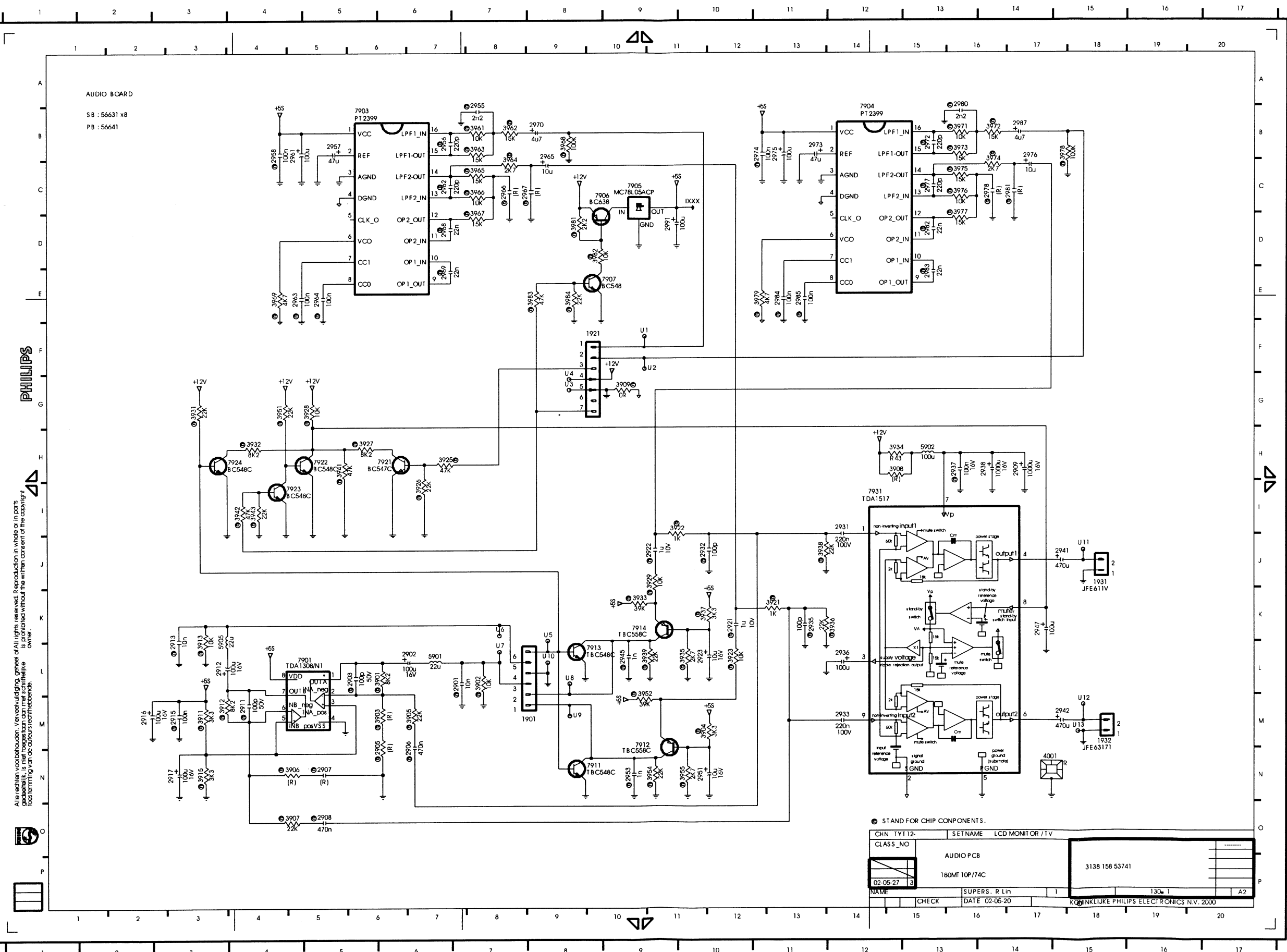
CHN TYT 12-		SETNAME LCD MONITOR / TV	
CLASS_NO		PHONE JACK PCB	
02-04-30		180MT 10P/00C	
NAME F.Y. Liu/J. Cheng		SUPERS.	
MGr		CHECK *****	
DATE 01-11-09		KONINKLIJKE PHILIPS ELECTRONICS N.V. 2000	

Phone Jack C.B.A

- 1942 A3 B
- 1943 A1 B
- 1944 A3 B
- 2971 A1 A
- 2972 A1 A
- 2973 A3 A
- 2974 A3 A

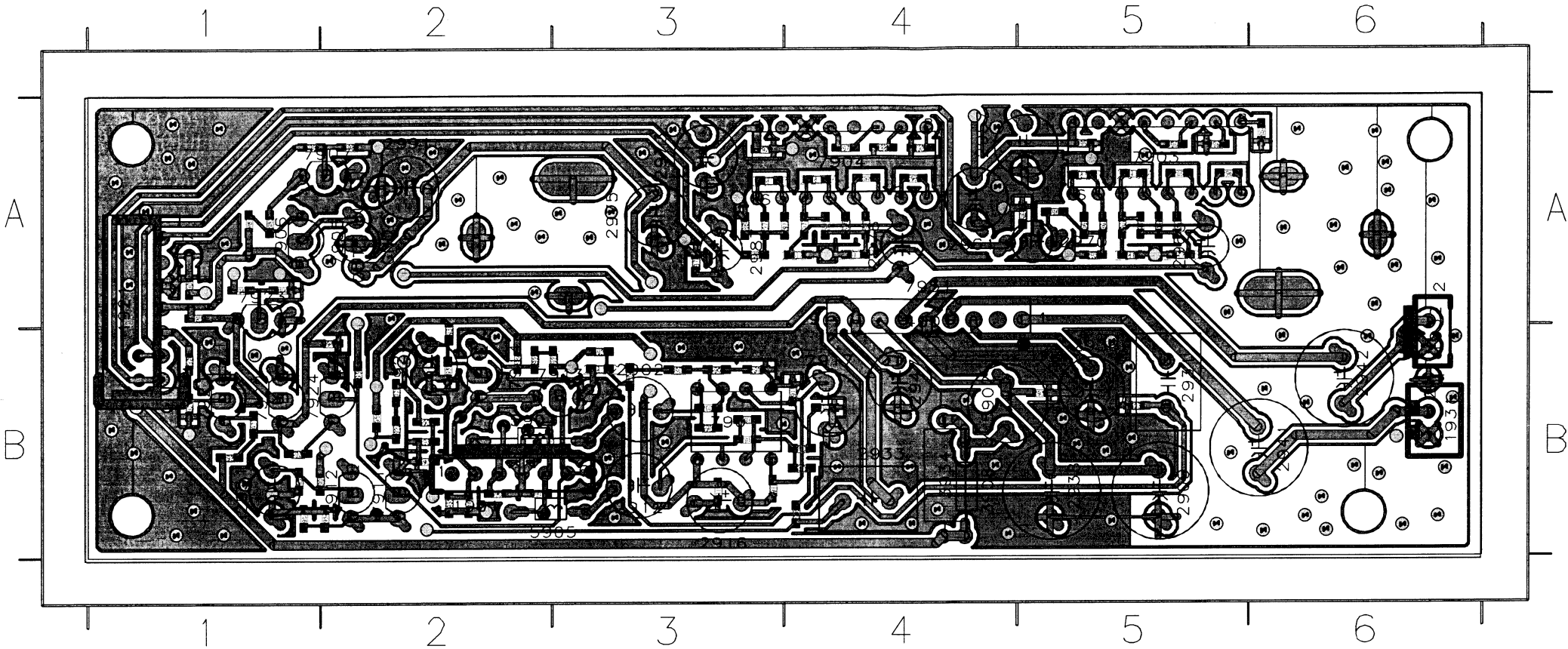


A black and white micrograph of a microchip. The chip is rectangular with a central dark area and various circuit patterns. A ruler scale is visible at the top, with markings from 1 to 6.[illegible]

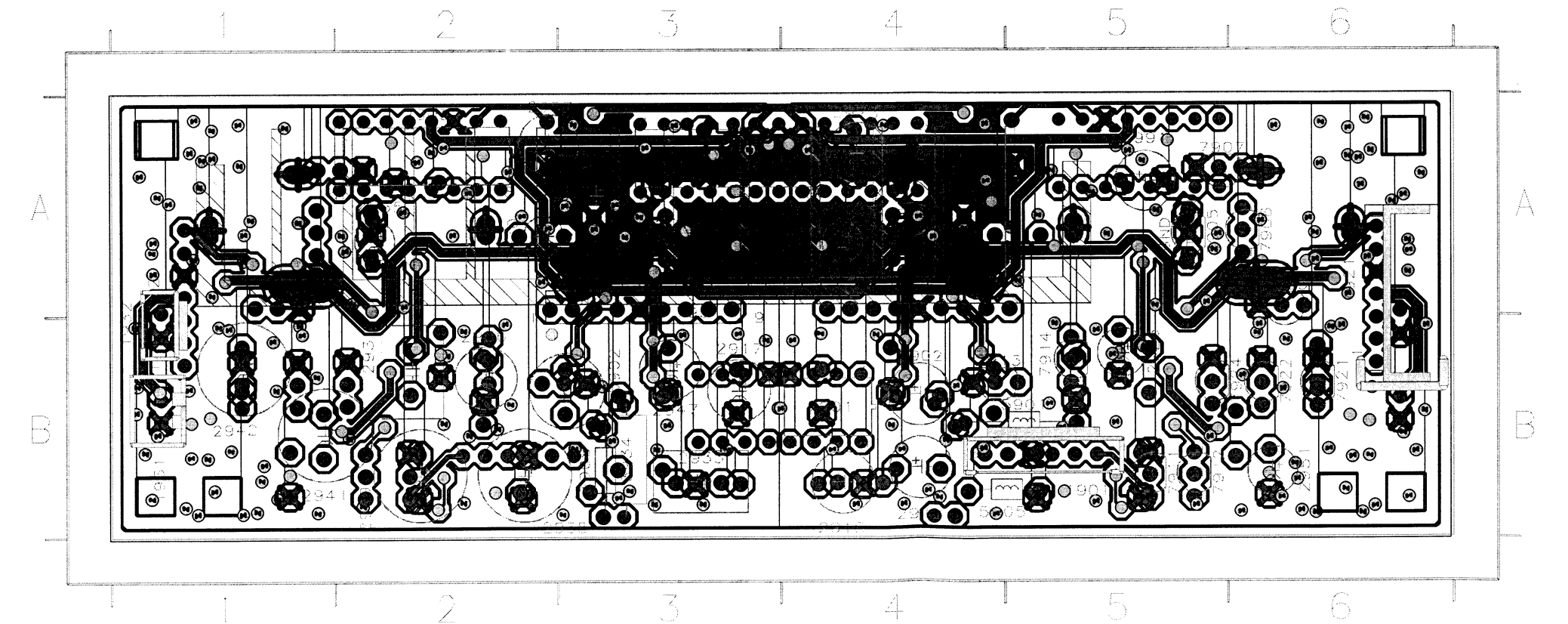


U1E9 7911 J8
U2E9 7912 J9
U3E8 7913 J8
U4E8 7914 J9
U5I8 7921 F6
U6I7 7922 F5
U7I7 7923 G4
U8I8 7924 F3
U9 J8 7931 G12
U10I8
U11 G15
U12 I15
U13 J15
U14 J8
U15 F8
U16 H15
U17 J15
U18 J15
U19 J15
U20 J15
U21 J15
U22 J15
U23 J15
U24 J15
U25 J15
U26 J15
U27 J15
U28 J15
U29 J15
U30 J15
U31 J15
U32 J15
U33 J15
U34 J15
U35 J15
U36 J15
U37 J15
U38 J15
U39 J15
U40 J15
U41 J15
U42 J15
U43 J15
U44 J15
U45 J15
U46 J15
U47 J15
U48 J15
U49 J15
U50 J15
U51 J15
U52 J15
U53 J15
U54 J15
U55 J15
U56 J15
U57 J15
U58 J15
U59 J15
U60 J15
U61 J15
U62 J15
U63 J15
U64 J15
U65 J15
U66 J15
U67 J15
U68 J15
U69 J15
U70 J15
U71 J15
U72 J15
U73 J15
U74 J15
U75 J15
U76 J15
U77 J15
U78 J15
U79 J15
U80 J15
U81 J15
U82 J15
U83 J15
U84 J15
U85 J15
U86 J15
U87 J15
U88 J15
U89 J15
U90 J15
U91 J15
U92 J15
U93 J15
U94 J15
U95 J15
U96 J15
U97 J15
U98 J15
U99 J15
U100 J15

Sound Board (C.B.A)

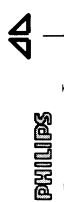


1901 B2	B	2901 B2	A
1921 A1	B	2903 B3	A
1931 B6	B	2905 B3	A
1932 B6	B	2906 B3	A
2902 B3	B	2907 B4	A
2909 B5	B	2908 B4	A
2912 B3	B	2911 B3	A
2916 B3	B	2913 B2	A
2917 B4	B	2915 B3	A
2923 B2	B	2921 B2	A
2931 B5	B	2922 B3	A
2933 B4	B	2932 B3	A
2936 B5	B	2935 B2	A
2938 B5	B	2937 B5	A
2941 B6	B	2945 B2	A
2942 B6	B	2953 B1	A
2947 B4	B	2955 A5	A
2951 B1	B	2956 A5	A
2957 A4	B	2958 A5	A
2961 A4	B	2962 A5	A
2965 A5	B	2963 A5	A
2970 A5	B	2964 A6	A
2973 A3	B	2966 A5	A
2975 A3	B	2967 A5	A
2976 A4	B	2968 A5	A
2987 A3	B	2969 A5	A
2991 A2	B	2972 A3	A
3908 B4	B	2974 A3	A
3934 B4	B	2977 A4	A
4001 A4	B	2978 A4	A
5901 B2	B	2980 A3	A
5902 B4	B	2981 A4	A
5905 B3	B	2982 A4	A
7901 B3	B	2983 A4	A
7903 A5	B	2984 A4	A
7904 A4	B	2985 A4	A
7905 A2	B	3901 B3	A
7906 A1	B	3902 B2	A
7907 A2	B	3903 B3	A
7911 B2	B	3904 B2	A
7912 B2	B	3905 B3	A
7913 B3	B	3906 B4	A
7914 B2	B	3907 B4	A
7921 B1	B	3909 A1	A
7922 B1	B	3911 B3	A
7923 A1	B	3912 B3	A
7924 B1	B	3913 B2	A
7931 A4	B	3915 B4	A
		3921 B2	A
		3922 B3	A
		3923 B2	A
		3925 B1	A
		3926 B1	A
		3927 B1	A
		3928 B1	A
		3929 B2	A
		3931 B2	A
		3932 B1	A
		3933 B2	A
		3935 B2	A
		3936 B2	A
		3937 B2	A
		3938 B5	A
		3939 B2	A
		3941 B2	A
		3942 A1	A
		3943 A1	A
		3951 A1	A
		3952 B2	A
		3954 B2	A
		3955 B1	A
		3961 A5	A
		3962 A5	A
		3963 A5	A
		3964 A5	A
		3965 A5	A
		3966 A5	A
		3967 A5	A
		3968 A5	A
		3969 A5	A
		3971 A3	A
		3972 A3	A
		3973 A4	A
		3974 A4	A
		3975 A4	A
		3976 A4	A
		3977 A4	A
		3978 A3	A
		3979 A4	A
		3981 A1	A
		3982 A1	A
		3983 A1	A
		3984 A2	A



1901 B5	B	3921 B2	A
1921 A6	B	3922 B3	A
1931 B1	B	3923 B2	A
1932 B1	B	3925 B1	A
2902 B4	B	3926 B1	A
2909 B2	B	3927 B1	A
2912 B4	B	3928 B1	A
2916 B4	B	3929 B2	A
2917 B3	B	3931 B2	A
2923 B5	B	3932 B1	A
2931 B2	B	3933 B2	A
2933 B3	B	3935 B2	A
2936 B2	B	3936 B2	A
2938 B3	B	3937 B2	A
2941 B1	B	3938 B5	A
2942 B1	B	3939 B2	A
2947 B3	B	3941 B2	A
2951 B6	B	3942 A1	A
2957 A2	B	3943 A1	A
2961 A3	B	3951 A1	A
2965 A2	B	3952 B2	A
2970 A2	B	3954 B2	A
2973 A4	B	3955 B1	A
2975 A4	B	3961 A5	A
2976 A3	B	3962 A5	A
2987 A4	B	3963 A5	A
2991 A5	B	3964 A5	A
3908 B3	B	3965 A5	A
3934 B3	B	3966 A5	A
4001 A3	B	3967 A5	A
5901 B5	B	3968 A5	A
5902 B3	B	3969 A5	A
5905 B4	B	3971 A3	A
7901 B4	B	3972 A3	A
7903 A2	B	3973 A4	A
7904 A3	B	3974 A4	A
7905 A5	B	3975 A4	A
7906 A6	B	3976 A4	A
7907 A5	B	3977 A4	A
7911 B5	B	3978 A3	A
7912 B5	B	3979 A4	A
7913 B4	B	3981 A1	A
7914 B5	B	3982 A1	A
7921 B6	B	3983 A1	A
7922 B6	B	3984 A2	A
7923 A6	B		
7924 B6	B		
7931 A3	B		

44

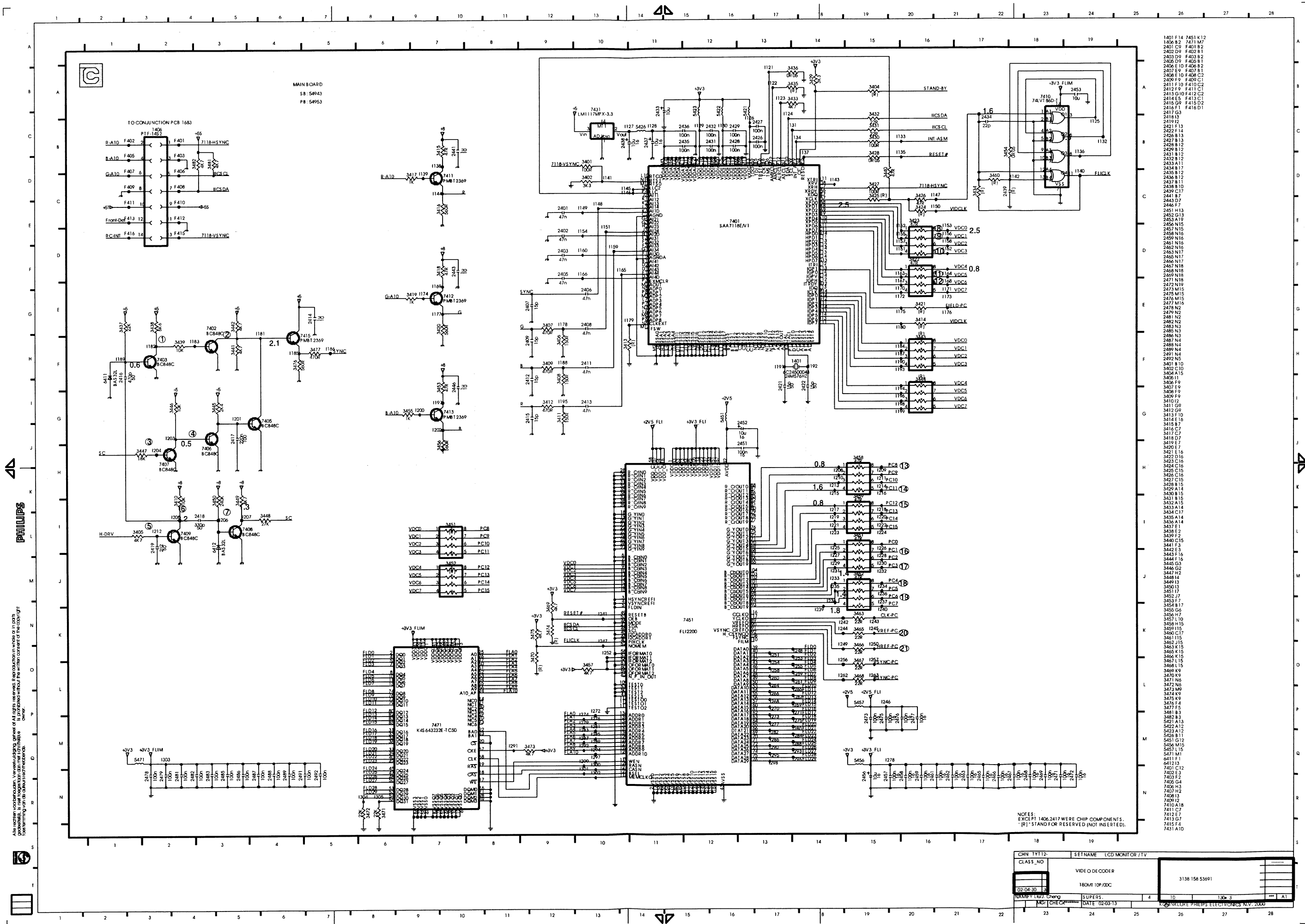


Alle rechten voorbehouden. Verveelvuldiging, geheel of All rights reserved. Reproduction in whole or in parts is prohibited without the written consent of the copyright owner.

NOTES:
EXCEPT 1001,1002,1003,1011,1021,1201,2006,2008,2009
2017,2021,2027,2030,2051,3023,3040,5005,5022,7202,7203
5007,2020,2026 WERE CHIT COMPONENTS.
* [R] * STAND FOR RESERVED (NOT INSERTED).

GHN TTT12		SETNAME LCD MONITOR / TV	
CLASS NO		POWER/CPU	
180MT 10P.00C		3138 158 53691	
NAME-Y. L. Chong		SUPERS	
MOJ CHEG*****		DATE 02-03-13	
23		25	
26		28	

44



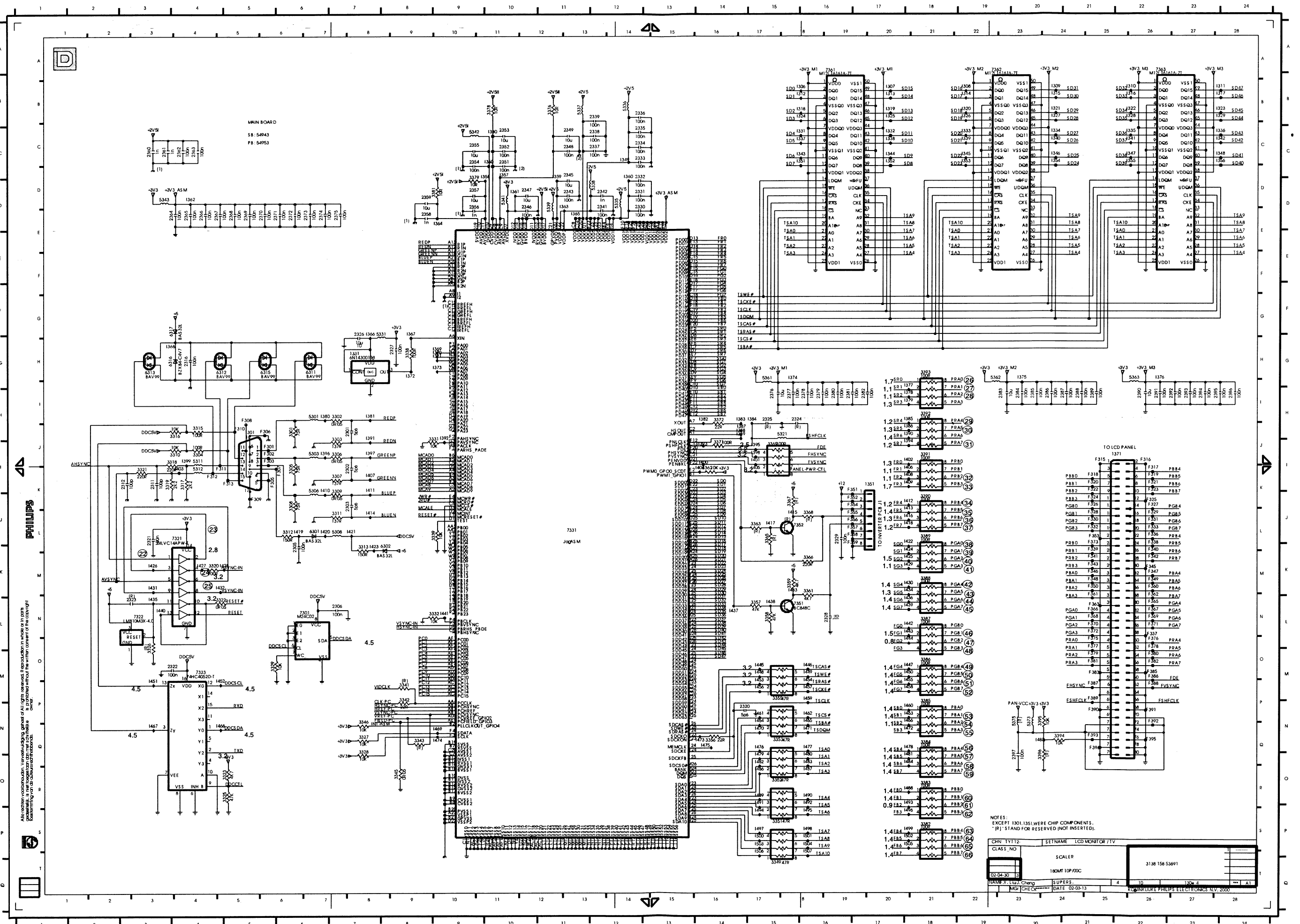
51

Alle rechten voorbehouden. Vervolmelding, geheel of All rights reserved. Reproduction in whole or in parts is prohibited without the written consent of the copyright owner.

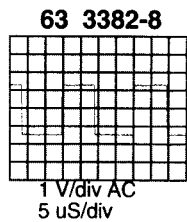
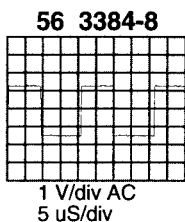
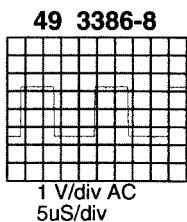
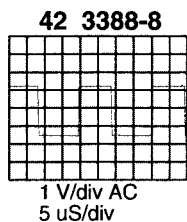
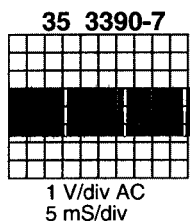
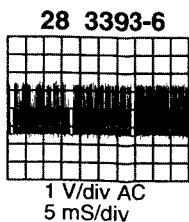
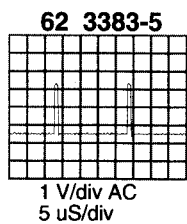
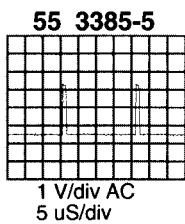
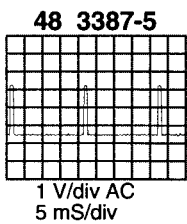
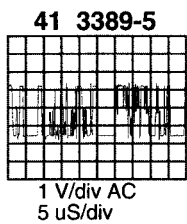
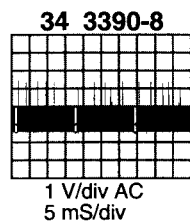
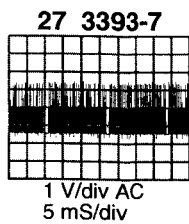
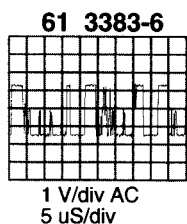
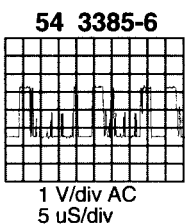
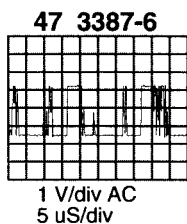
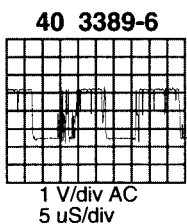
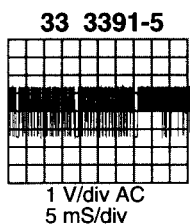
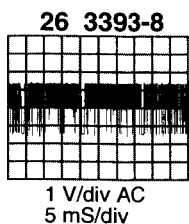
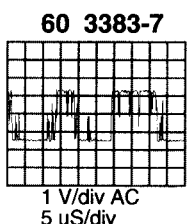
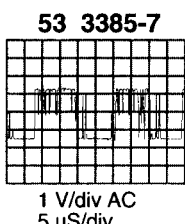
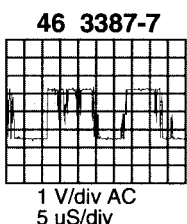
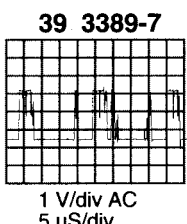
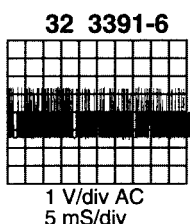
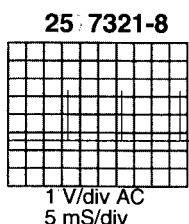
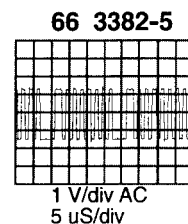
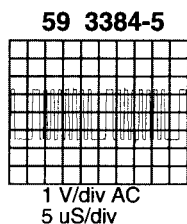
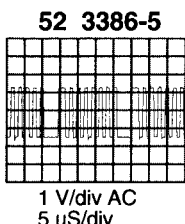
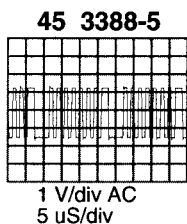
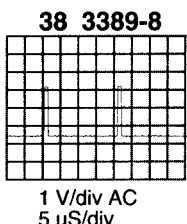
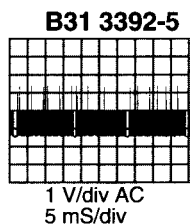
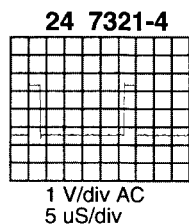
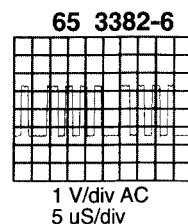
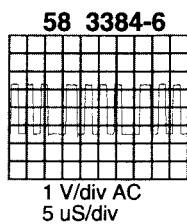
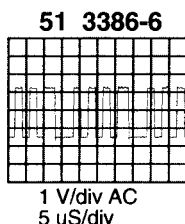
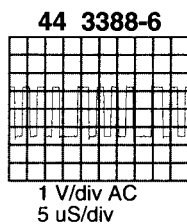
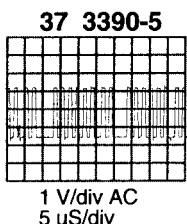
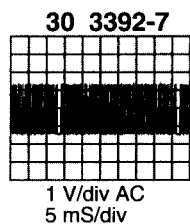
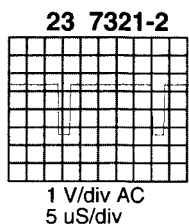
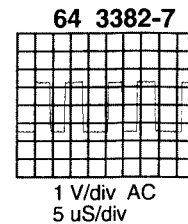
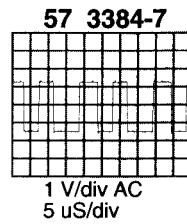
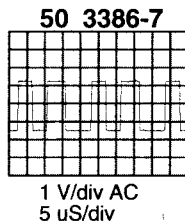
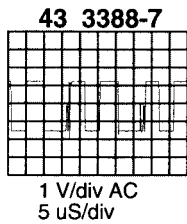
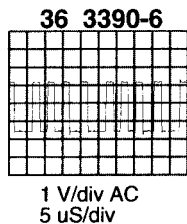
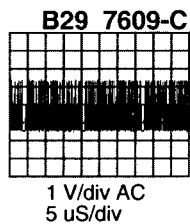
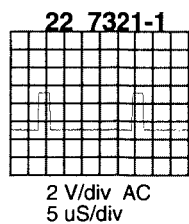


Schematic Diagram (Scaler)

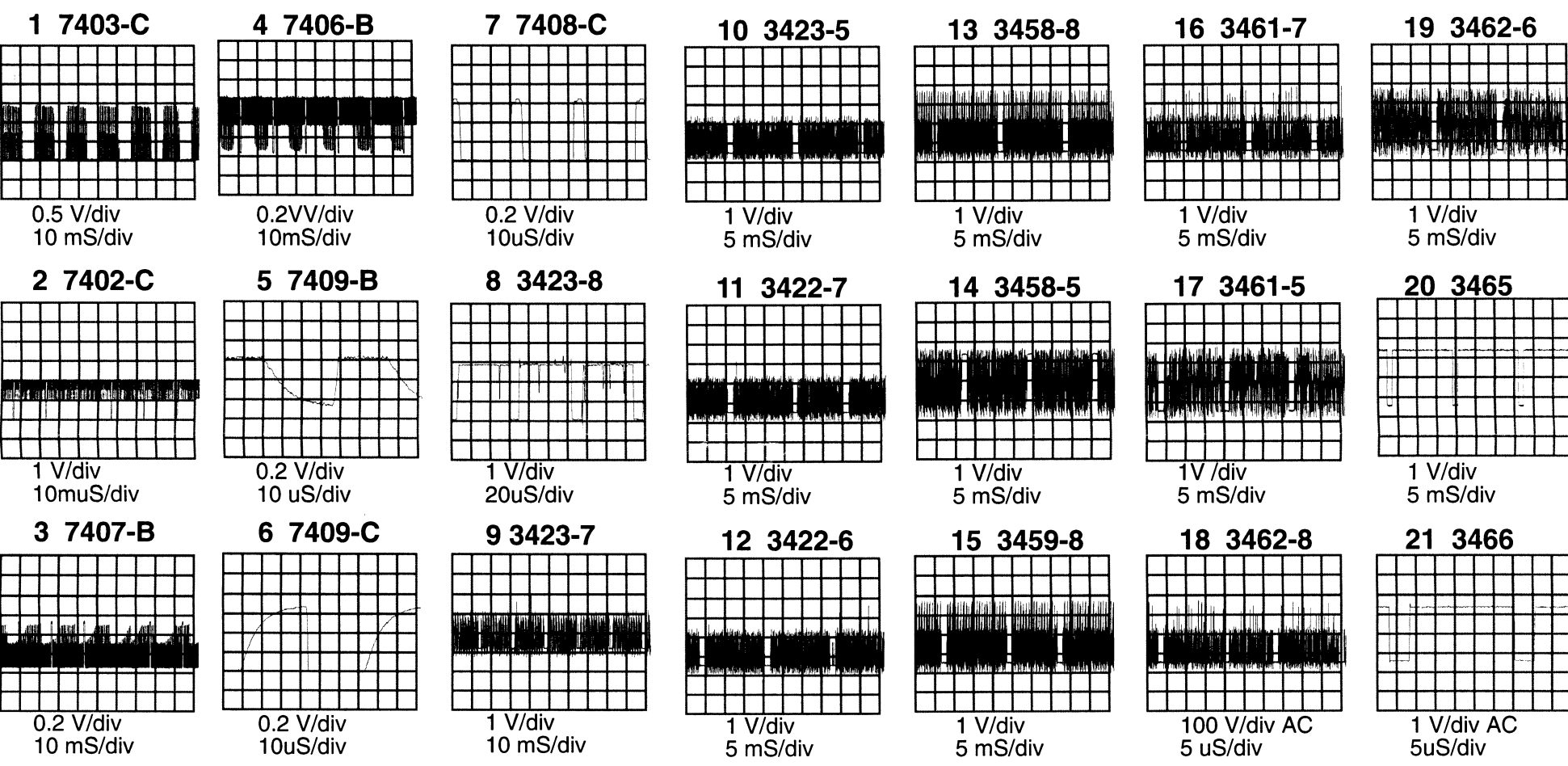
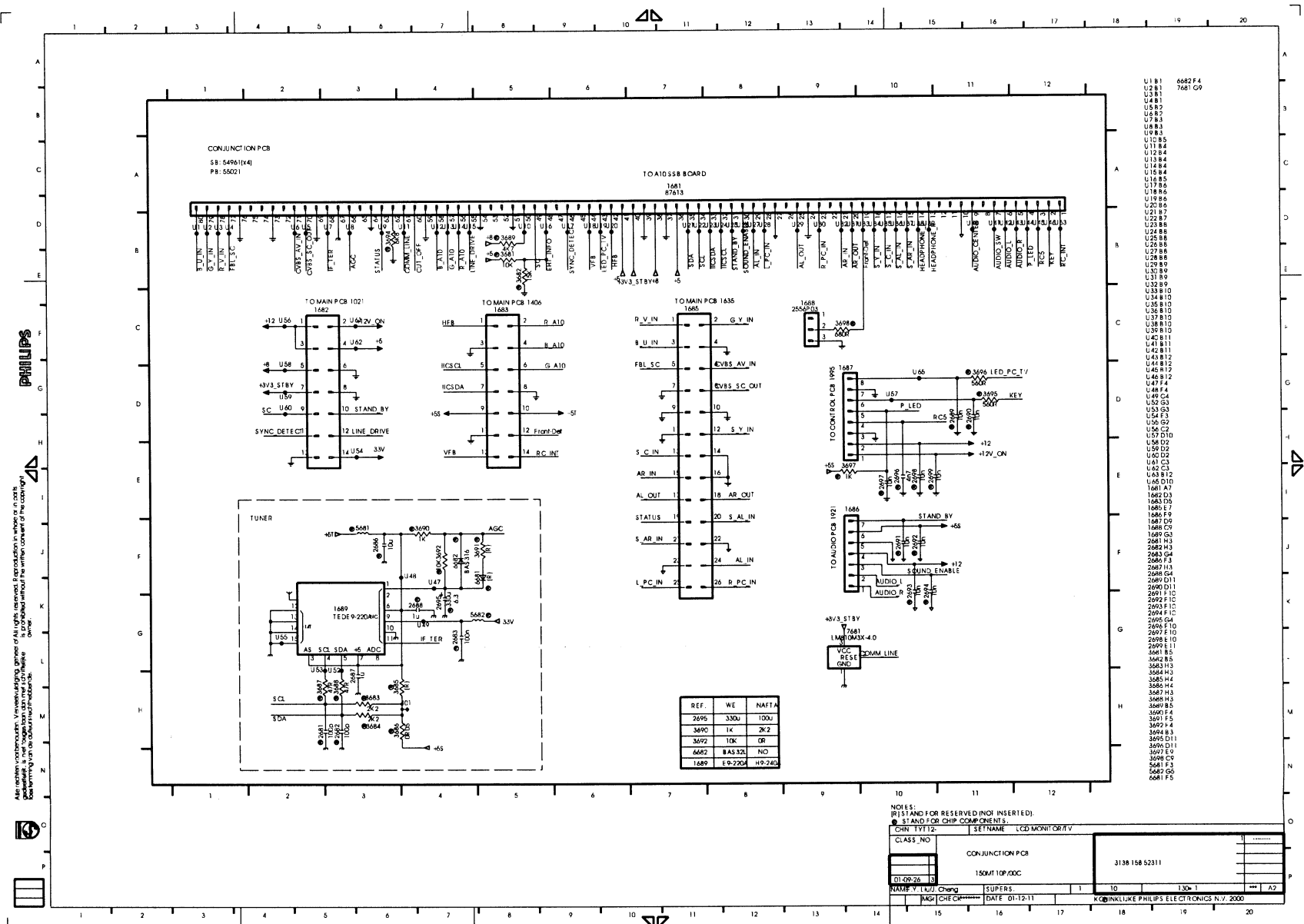
Go to cover page



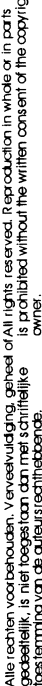
Waveforms



Schematic Diagram (Conjunction PCB)



Salih



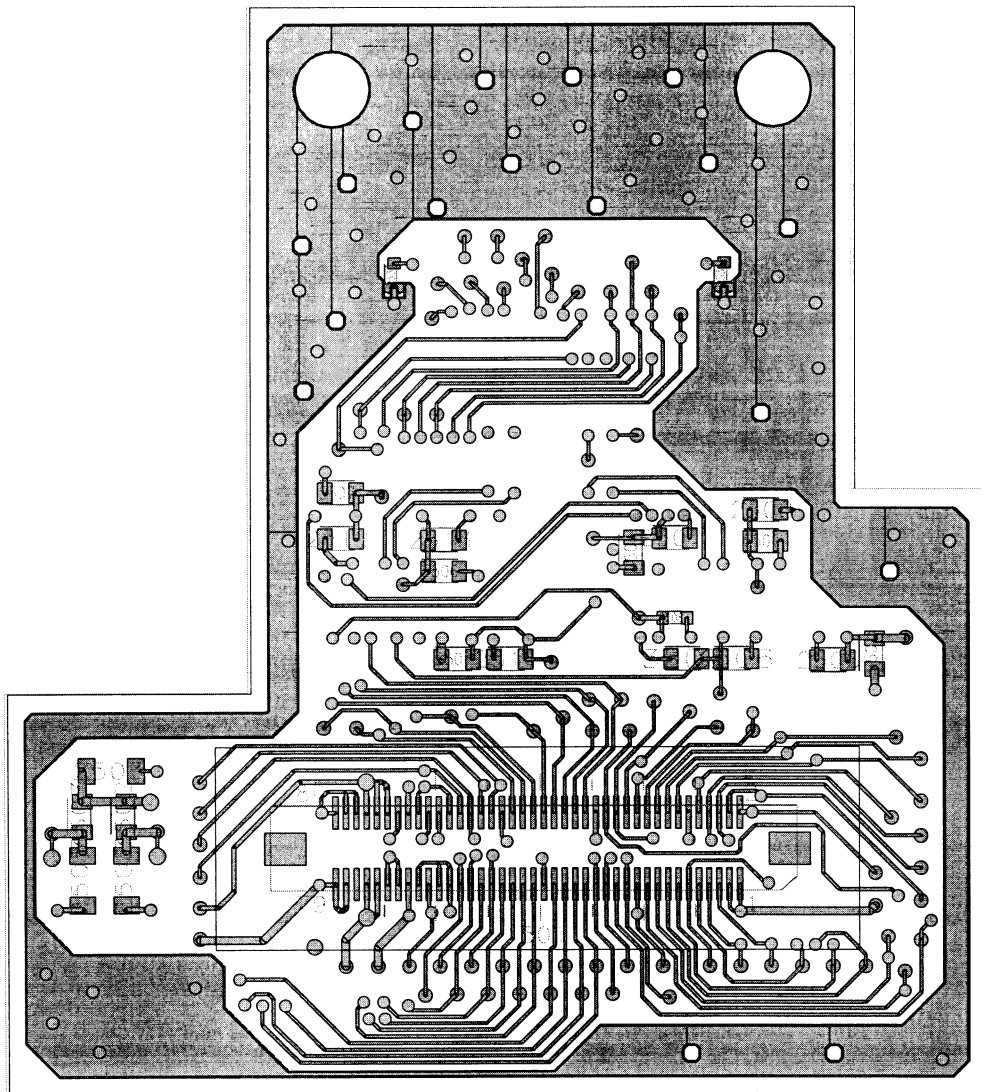
CHN TYT12-		SETNAME LCD MONITOR /TV	
CLASS_NO		VIDEO I/O	
		3138 158 53691	
02-04-30 3		180MT 10P/00C	
NAMEFY Liu J. Cheng		SUPERS.	
MGR/CHK*****		DATE 02-03-13	
		KODINKLUKE PHILIPS ELECTRONICS N.V. 2000	

LVDS C.B.A.

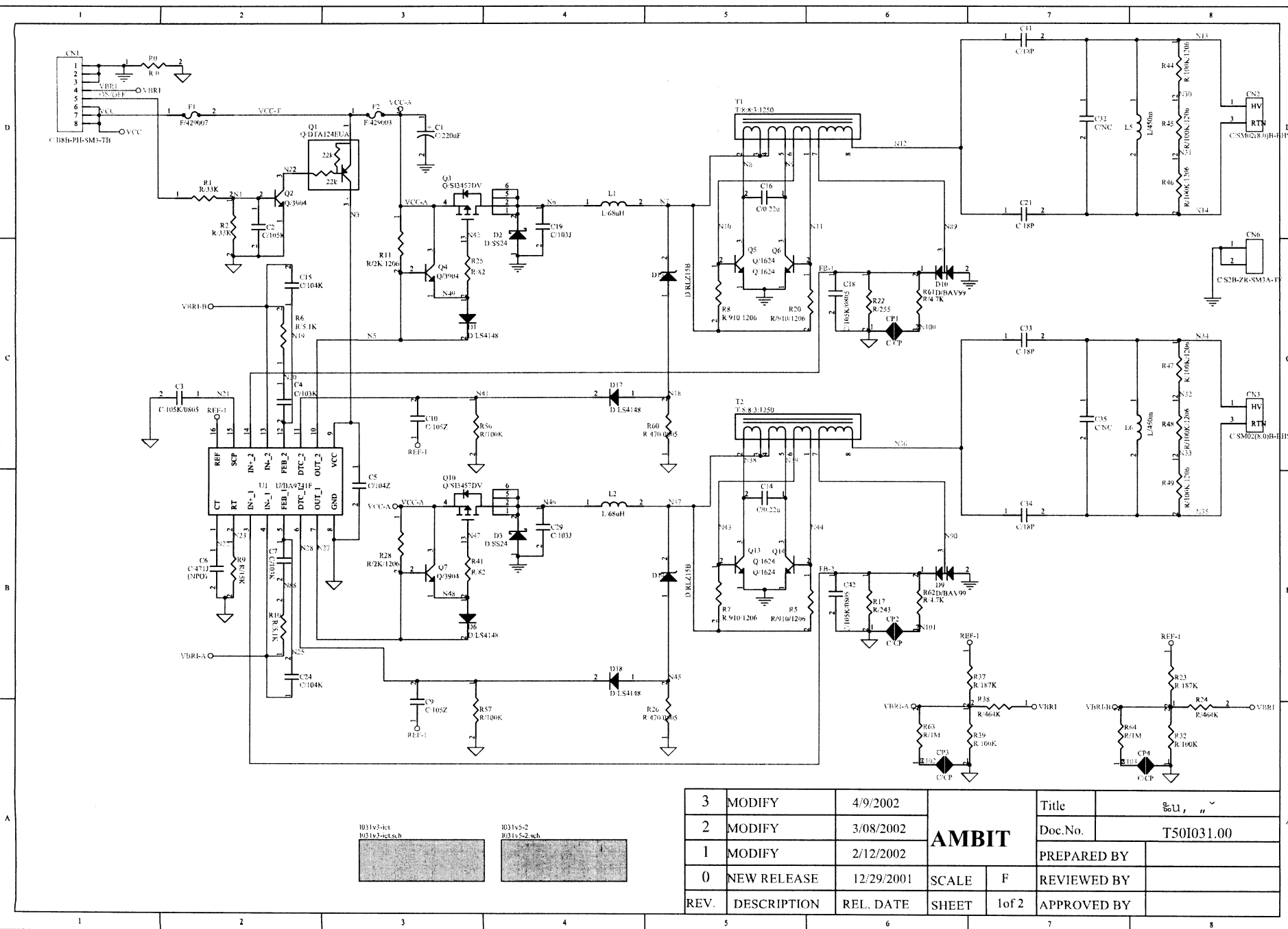
180MT10P LMT

53

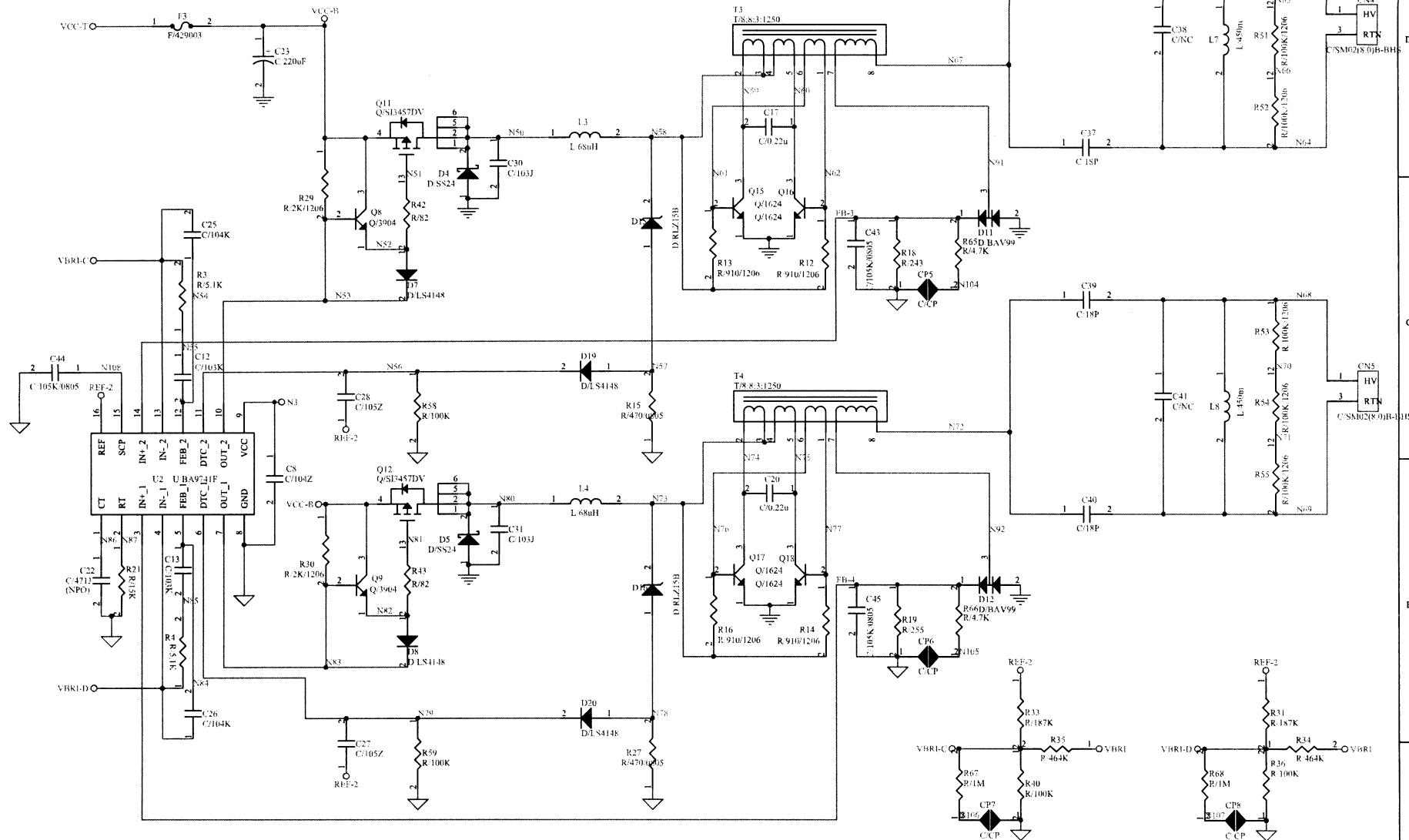
◀◀ Go to cover page



Inverter Diagram



3	MODIFY	4/9/2002	AMBIT		Title	%u, "
2	MODIFY	3/08/2002			Doc.No.	T50I031.00
1	MODIFY	2/12/2002			PREPARED BY	
0	NEW RELEASE	12/29/2001			REVIEWED BY	
REV.	DESCRIPTION	REL. DATE	SCALE	F	APPROVED BY	
			1of 2			



TRAY1
M:TRAY-218B

PCB BOARD
M:PCB BOARD

M:SOLDER
SOLDER

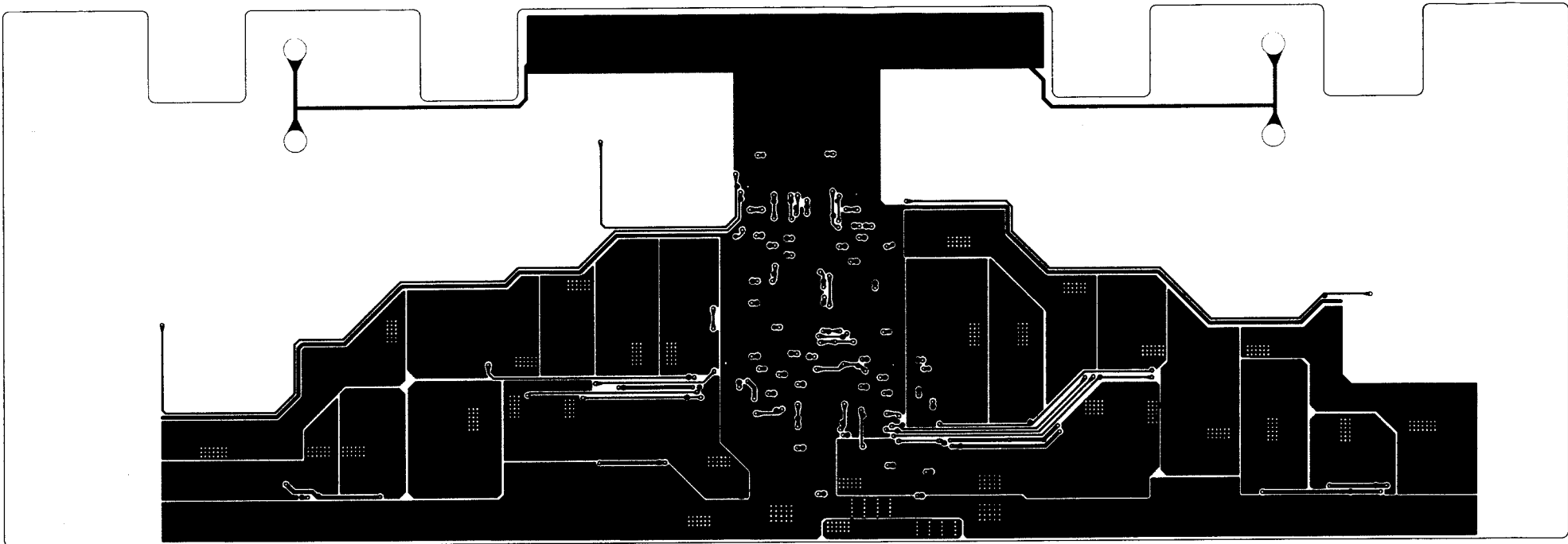
LABEL1
M:LABEL

CARTON1
M:CARTON

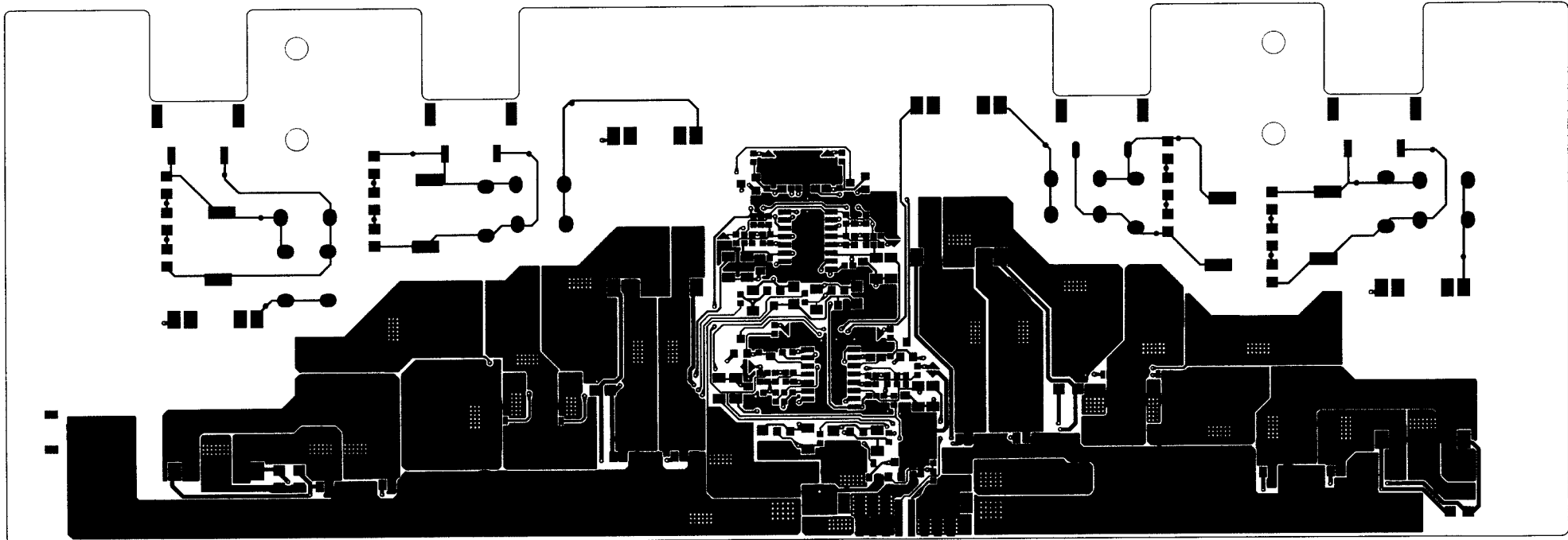
3	MODIFY	4/9/2002	AMBIT		Title	ꣳu, „~
2	MODIFY	3/08/2002			Doc.No.	T50I031.00
1	MODIFY	2/12/2002			PREPARED BY	
0	NEW RELEASE	12/29/2001			SCALE	F
REV.	DESCRIPTION	REL. DATE	SHEET	2of 2	APPROVED BY	

Inverter layout drawings

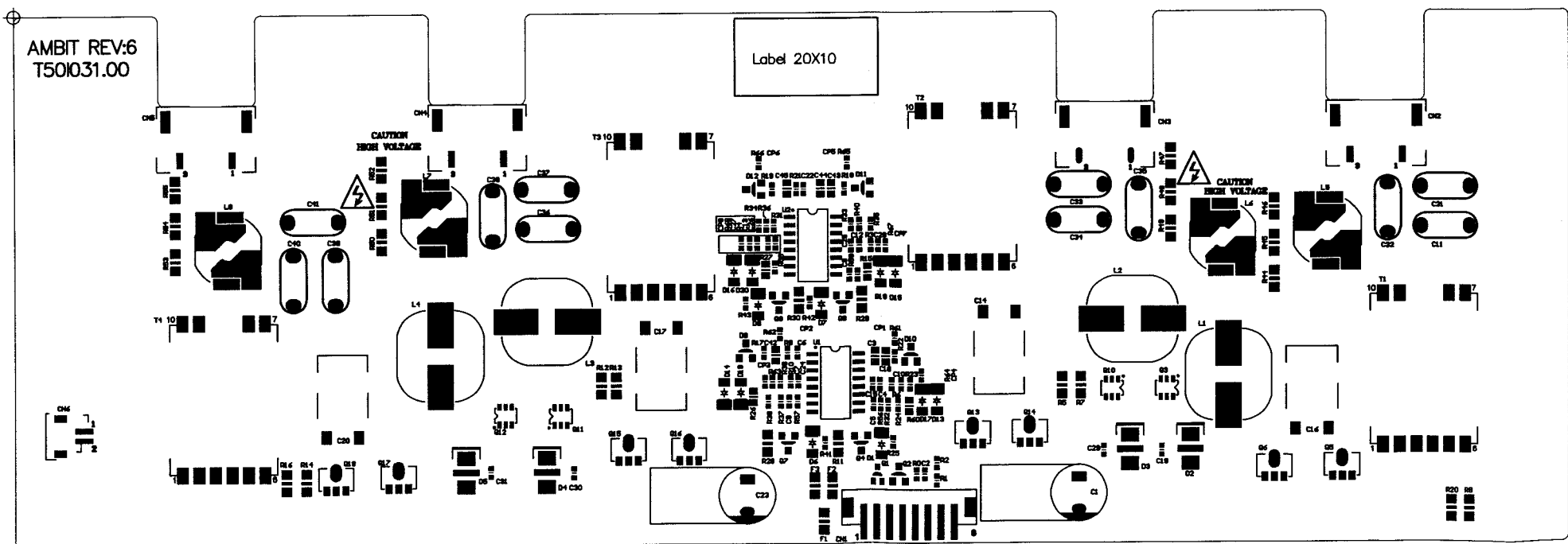
Bottom layer



Top layer



Top overlayer

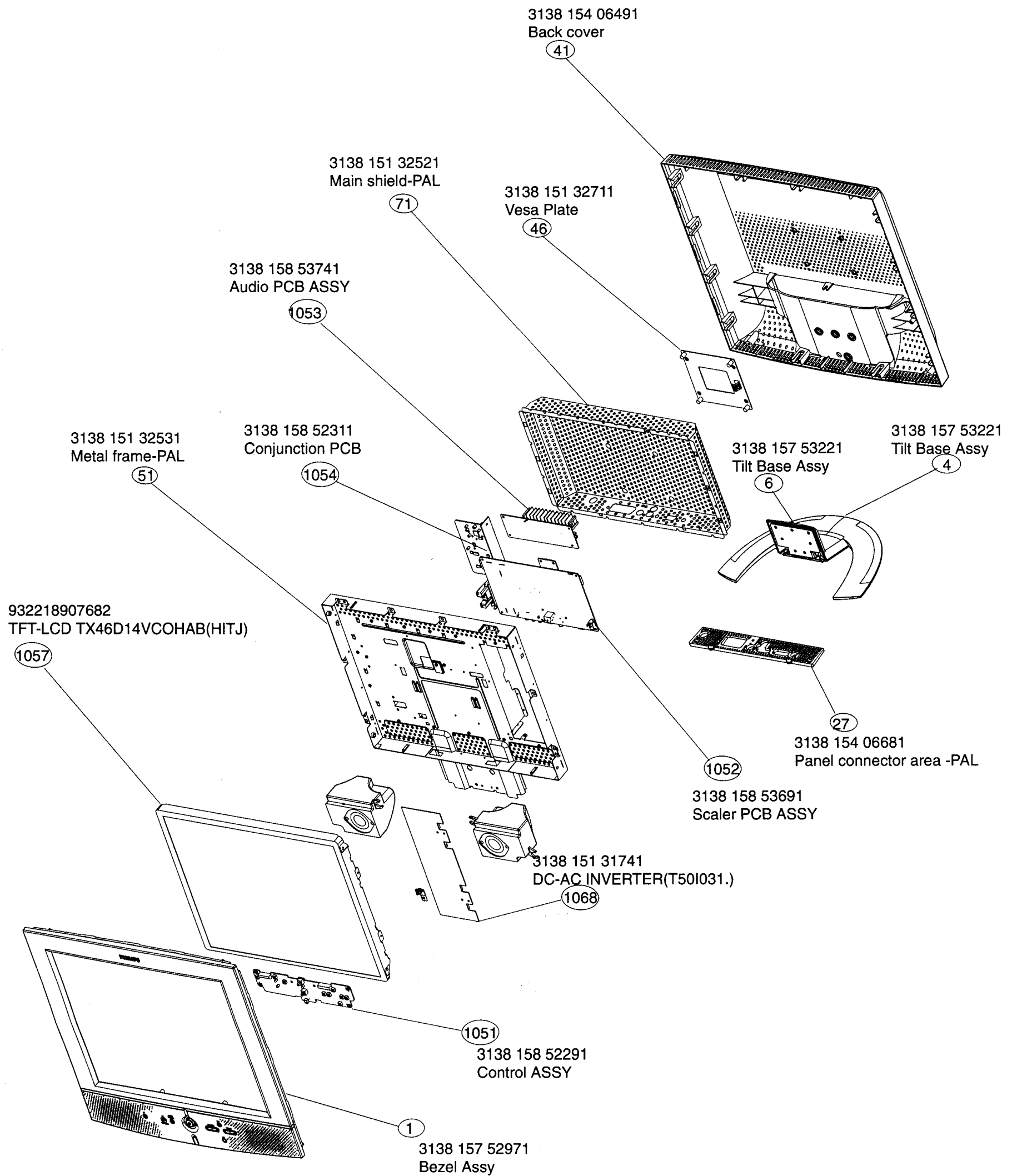


Exploded View

180MT10P LMT

55

Go to cover page



Recommended Parts List

◀◀ Go to cover page

Model: 180MT10P/00C

Item	Code Number	Description
1	313815752971	BEZEL ASSY
2	138157532981	BACK COVER ASSY
4	313815753221	TILT BASE ASSY
6	313815406671	BASE COVER
7	313815404151	POWER KNOB
30	313815555701	PLASTIC COVER
41	313815406491	BACK COVER
46	313815132711	VESA PLATE
61	313815160741	BASE
81	313815406471	BEZEL
82	313815406481	DECORATION
141	313815520882	QUICK SETUP GUIDE
450	313815632841	CARTON
451	313815632821	EPE CUSHION-LEFT
452	313815632831	EPE CUSHION-RIGHT
453	313815620801	P.E.BAG-STAT.
601	313811703663	E-D.F.U. ASSY
602	313811703673	E-D.F.U
1051	313815852291	CONTROL PCB ASSY
1052	313815853691	SCALER PCB ASSY
1053	313815853741	AUDIO PCB ASSY
1054	313815852311	CONJUNCTION PCB ASSY
1055	313815853721	PHONE JACK PCB ASSY
1056	313815853681	LVDS PCB ASSY
1057	932218907682	TFT-LCD TX46D14VCOHAB(HITJ)B
1060	313812874931	MAINS CORD
1062	313818872471	CORD PHONE 1M5 PHONE M BLK
1064	313816878511	I/F CABLE
1065	929900010137	BAT ZNC 1.5V R6/AA
1066	313922889481	PRODUCT ASSY RC25107/PACKED
1068	823827712031	DC-AC INVERTER(T50I031.)
1069	823827712041	AC/DC ADAPTOR(SLS0111B12043)
	313810610197	ROM assy with program (7203)
	313810610200	EEPROM with program assy (7202)
6994	932213169687	IR RECEIVER TSOP1836SS3V
7011	932211529668	FET POW SM SI9433DY
7201	935256600112	IC SM P80C51RA+4A
7202	932212662682	IC M24C16-BN6
7331	932217970671	IC SM JagASM
7410	935209280118	IC SM 74LVT86D
7431	932216733668	IC SMLD1117S33
7451	932216918671	IC SM FLI22
7471	932217603668	IC SM K4S643232E-TC50

823827712031 DC-AC INVERTER

C1	9965 000 14741	CAP. AL SC025M0220CBT 220uF/25v
C16	9965 000 14767	CAP. MPP R79GC3220ZA 0.22uF/160V
D2	9965 000 06330	DIODE SBD S24 SMA(GW)
Q5	9965 000 14768	TR NPN 2SD1624T-TD SOT89/SANYO
Q1	9965 000 05479	TR DTA124EUA
Q10	9965 000 05480	FET <1W SI3457DV/TSOP6
U1	9965 000 06332	IC BA9741F SOP16(ROHM)
Q9	9965 000 08855	TR NPN MMBT3904LT1SOT23(MOTO)
T1	9965 000 14769	XFMR SIT08133-15A V:01(TMP)
F1	9965 000 12325	FUSE 429007 7A(LITTEL)

Spare Parts List

MODEL: 180MT10P/00C

0001	313815752981	BACK COVER ASSY
0002	313815752971	BEZEL ASS'Y
0004	313815753221	TILT BASEASSY
0006	313815406671	BASE COVER
0007	313815404151	POWER KNOB
0027	313815406681	Panel connector area-PAL
0030	313815555701	PLASTIC COVER
0041	313815406491	BACK COVER
0046	313815132711	VESA PLATE
0051	313815132531	MAIN METALFRAME -PAL
0061	313815160741	BASE
0062	313815132651	HINGE ASSEMBLY
0063	313815404421	SCREW COVER - BASE
0064	313815404571	RUBBER PAD-BASECENTER
0065	313815404761	RUBBER PAD-BASELEFT
0066	313815404771	RUBBER PAD - BASE RIGHT
0069	313815404251	SCREW - M4-0.7X8
0071	313815132521	Main Shield-PAL
0081	313815406471	BEZEL
0082	313815406481	DECORATION
0083	313815404171	LENS - PC/TV
0084	313815406691	LENS - IR
0086	313815406611	CONTROL KNOB -L
0087	313815406621	CONTROL KNOB -R
0089	313810040981	HI-LO SCREW 3.5X9
0133	313810632613	PE BAG
0140	313800990381	PROCESS BOX
0141	313815520882	QUICK SETUP GUIDE
0221	313810355591	LVDs PCB-MULTI
0230	313800990541	PROCESS BOX
0248	313800990541	PROCESS BOX
0249	313800990541	PROCESS BOX
0279	313800990551	PROCESS BOX
0287	313800990051	PROCESS BOX
0288	313800990561	PROCESS BOX
0450	313815632841	CARTON
0451	313815632821	EPE CUSHION - LEFT
0452	313815632831	EPE CUSHION - RIGHT
0453	313815620801	P.E.BAG-STAP
0454	122210033005	TAPE ADHCELLOPH 19MM TRP
0455	123810078007	TAPE S-ADHPP 0.065X75MM NT
0500	083802600004	LLDPE WRAP
0501	283880090207	PALLET
0503	313810651051	CARD BOARD
0504	313810606081	FAMILY SHEET - W/O ADH.
0505	313815633731	SLIP SHEET
0601	313811703663	E-D.F.U ASSY
0602	313811703673	E-D.F.U
0615	313811704351	HEX CODE OF S/W(NOMATL REQ)
1001	242202605309	SOC SUPP H1P F DC 2.5MM L
1002	242208611053	FUSE SM F 7A 125V UL R
1003	313816872041	CON BM V 4PMM24264
1011	313816020021	HEADER 3X1 82540-0311
1012	313816020291	JUMPER (BLACK)
1021	313818872321	CON BM V 14PF 2.0
1051	313815852291	CONTROL PCB ASSY
1052	313815853691	SCALER PCB ASSY
1053	313815853741	AUDIO PCB ASSY
1054	313815852311	CONJUNCTION PCB ASSY
1055	313815853721	PHONE JACK PCB ASSY
1056	313815853681	LVDS PCBASSY
1057	932218907682	TFT-LCD TX46D14VC0HAB (HITJ)
1060	313812874931	MAINSCORD
1062	313818872471	CORD PHONE 1M5 PHONE M BLK
1064	313816878511	I/F CABLE
1065	929900010137	BAT ZNCL1.5V R6/AA 2-PACK Y
1066	313922889481	PRODUCT ASSY RC25107/packed
1067	8288227712051	LSP BOX 4R3W L/R (PH-18LCD)
1068	8282872712031	DC-AC INVERTER(T50103.1)
1069	8282872712041	AC/DC ADAPTER(SLS0111B12043)
1163	313814971251	BB IF TERRESTRIAL
1164	313814973191	BB POWER CONVERSION
1165	313814973201	BB DISPLAY/PRESENTATION
1166	313814973221	BB SOUND PRESENTATION
1167	313814971291	BB ACCESSORY
1168	313814971311	BB MAINS CORD
1169	313814973211	BB REMAINING WIRE ASSY
1170	313913725771	SB-WEU-CM-HIS-1-SA-LCD
1202	2438543000931	RES XTL SM 14M31818 7P SMD49
1208	243803100146	SOC ICL V 8PF 2.54 DIL B
1209	313818872411	CON BM V 32PM 2.54 62075
1211	313818872441	CON BM V 9PM 2.0 M2426
1301	243803100416	CON BM PAN H 15PF SUB-D B
1331	243854300092	OSC XTL SM 14M318 3C XO6N R
1351	313816879511	CON JFE6338 8PVERT.ENTRY
1371	242202517152	CON BM V 80PF 0.6 52760L
1401	243854300096	RES XTL M24M576 16P SMD-49P
1406	313818872321	CON BM V 14PF 2.0
1501	828287703391	CON .MOLEX-53481
1502	313816875171	CONN FI-TWE21P-PH
1601	242202517621	SOC UDIO H 21PF SHD L-GRND
1631	243803100431	SOC MDIN H 4PF 69015 B
1632	243803100428	SOC CINCIN H 2PF WHRD B
1633	243803100429	SOC PHONE H 1PF 3.5 ST B
1635	313818872291	CON BM V 26PF 2.0 68663
1681	242202516599</	

1686	313816879501	WAFER 7P
1687	313816879511	CON JFE6338 8PVERT.ENTRY
1688	313816020021	HEADER 3X1 82540-0311
1689	242254290109	TUN V+U PLLIEG BG B
1900	313815853761	AMP. TR. ASSY
1901	313818723111	CON BM V 6PM 2.5 A2502WV2
1921	313816875191	7PIN WAFER 2.5MMPIITCH
1931	243803100224	CON BM V 2PM 2.50 61142 B
1932	243803100099	CON BM V 2PM 2.50 63171 B
1942	313816876631	6P WAFER LTYPE (612661)
1943	313816877251	EARPHONE JACK
1944	313816877251	EARPHONE JACK
1986	313818723311	CON BM H 8PM 2.5 A2502WR2
1987	243812800196	SWI TACTH=5 GY 160GSKHHAM
1988	243812800196	SWI TACTH=5 GY 160GSKHHAM
1989	243812800196	SWI TACTH=5 GY 160GSKHHAM
1990	243812800196	SWI TACTH=5 GY 160GSKHHAM
1991	243812800196	SWI TACTH=5 GY 160GSKHHAM
1992	243812800196	SWI TACTH=5 GY 160GSKHHAM
1993	243812800196	SWI TACTH=5 GY 160GSKHHAM
1995	313818872301	CON BM H 8PM 2.5 A2502WR2
1996	242212802864	SWI PUSHP2P.0.2A 30V ESBE64B
1997	243812800196	SWI TACTH=5 GY 160GSKHHAM
1998	243812800196	SWI TACTH=5 GY 160GSKHHAM
1999	242212802864	SWI PUSHP2P.0.2A 30V ESBE64B

1052 Scaler PCB ASSY

— 11 —

2001	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2006	203803516304	ELCAP RXJ 25V5	470U	PM20 B
2007	223878615630	CER2 0603 X7R 16V	1N	PM10 R
2008	203803516304	ELCAP RXJ 25V5	470U	PM20 B
2009	203803516304	ELCAP RXJ 25V5	470U	PM20 B
2015	222224119876	CER2 1206 Y5V 10V	10U	P8020 R
2016	223858615636	CER2 0603 X7R 50V	10N	PM10 F
2017	203803516304	ELCAP RXJ 25V5	470U	PM20 B
2018	223858615636	CER2 0603 X7R 50V	10N	PM10 R
2019	223886715471	CER1 0603 NP050V	470P	PM5 R
2020	202203100074	ELCAP KM 16V5	10U	PM20 B
2021	202203100071	ELCAP SC 25V5	1U	PM20 B
2022	202002191725	ELCAP SM RVS 16V	10U	PM20 F
2023	222224119876	CER2 1206 Y5V 10V	10U	P8020 R
2024	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2025	223886715471	CER1 0603 NP050V	470P	PM5 R
2026	203803511605	ELCAP REA 63V S	1U	PM20B
2027	202203100071	ELCAP SC 25V5	1U	PM20 B
2028	223824619863	CER2 0603 Y5V 10V	1U	P8020 R
2029	223824619863	CER2 0603 Y5V 10V	1U	P8020 R
2030	202203100071	ELCAP SC 25V5	1U	PM20 B
2031	223858615636	CER2 0603 X7R 50V	10N	PM10 R
2032	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2033	223824619863	CER2 0603 Y5V 10V	1U	P8020 R
2034	223858615636	CER2 0603 X7R 50V	10N	PM10 R
2035	223886715229	CER1 0603 NP050V	22P	PM5 R
2036	223824619863	CER2 0603 Y5V 10V	1U	P8020 R
2037	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2038	202002191726	ELCAP SM RVS 16V	47U	PM20 F
2051	202002191726	ELCAP SM RVS 16V	47U	PM20 F
2052	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2053	20201293723	ELCAP SM RV2 16V	47U	PM20 F
2055	202001293721	ELCAP SM RV2 16V	10U	PM20 F
2056	20201293721	ELCAP SM RV2 16V	10U	PM20 F
2057	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2058	202001293723	ELCAP SM RV2 16V	47U	PM20 F
2201	223886715159	CER1 0603 NP050V	15P	PM5 R
2202	223886715159	CER1 0603 NP050V	15P	PM5 R
2203	202002191725	ELCAP SM RVS 16V	10U	PM20 F
2205	222224119876	CER2 1206 Y5V 10V	10U	P8020 R
2206	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2207	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2211	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2212	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2213	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2215	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2216	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2217	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2218	223858615623	CER2 0603 X7R 50V	1N	PM10 R
2301	223886715568	CER1 0603 NP050V	5P6	PM0P5
2302	223886715568	CER1 0603 NP050V	5P6	PM0P5
2303	223886715568	CER1 0603 NP050V	5P6	PM0P5
2305	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2306	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2311	223886715101	CER1 0603 NP050V	1P	PM5 R
2312	223886715101	CER1 0603 NP050V	1P	PM5 R
2316	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2320	223886715568	CER1 0603 NP050V	5P6	PM0P5
2321	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2322	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2326	222224119876	CER2 1206 Y5V 10V	10U	P8020 F
2327	223878615649	CER2 0603 X7R 16V	1N	PM10 R
2328	223824619863	CER2 0603 Y5V 10V	1U	P8020 R
232				

[illegible]

Spare Parts List

Go to cover page

2451	223878615649	CER2 0603 X7R 16V	1N PM10 R	2923	203803513202	ELCAP RGA	16V S 10U PM20 A	3071	319802132230	RST SM 0603	22K PM5 COL
2452	202002191725	ELCAP SM RVS 16V	10U PM20	2931	222236525224	CAP MPOL	1VS 220N PM10 A	3072	319802134730	RST SM 0603	47K PM5 COL
2453	222224119876	CER2 1206 Y5V 10V	10U P8020R	2932	223886715101	CER1 0603 NP050V	1P PM5 R	3073	319802131030	RST SM 0603	10K PM5 COL
2456	202002191725	ELCAP SM RVS 16V	10U PM20	2933	222236525224	CAP MPOL	1VS 220N PM10 A	3075	319802133330	RST SM 0603	33K PM5 COL
2457	223878615649	CER2 0603 X7R 16V	1N PM10 R	2935	223886715101	CER1 0603 NP050V	1P PM5 R	3201	319802134720	RST SM 0603	4K7 PM5 COL
2458	223878615649	CER2 0603 X7R 16V	1N PM10 R	2936	203803513201	ELCAP RGA	16V S 1U PM20A	3202	319802134720	RST SM 0603	4K7 PM5 COL
2459	223878615649	CER2 0603 X7R 16V	1N PM10 R	2937	223878615649	CER2 0603 X7R16V	1N PM10 R	3203	319802190030	RST SM 0603JUMP.	0R05 COL
2461	223878615649	CER2 0603 X7R 16V	1N PM10 R	2938	203803350019	ELCAP VZ	16VS 10U PM20 A	3206	319802131030	RST SM 0603	10K PM5 COL
2462	223878615649	CER2 0603 X7R 16V	1N PM10 R	2941	203803527205	ELCAP KM	16VS 470U PM20 A	3211	235003510472	RST NETW SMARV24 4X	4K7PM5
2463	223878615649	CER2 0603 X7R 16V	1N PM10 R	2942	203803527205	ELCAP KM	16VS 470U PM20 A	3212	235003510472	RST NETW SMARV24 4X	4K7PM5
2465	223878615649	CER2 0603 X7R 16V	1N PM10 R	2945	223858615623	CER2 0603 X7R50V	1N PM10R	3213	319802135610	RST SM 0603	560R PM5 COL
2466	223878615649	CER2 0603 X7R 16V	1N PM10 R	2947	203803500038	ELCAP SM	16VS 1U PM20 A	3215	319802135610	RST SM 0603	560R PM5 COL
2468	223878615649	CER2 0603 X7R 16V	1N PM10 R	2951	203803513202	ELCAP RGA	16V S 10U PM20 A	3216	319802135610	RST SM 0603	560R PM5 COL
2469	223878615649	CER2 0603 X7R 16V	1N PM10 R	2953	223858615623	CER2 0603 X7R50V	1N PM10R	3217	319802135610	RST SM 0603	560R PM5 COL
2471	223878615649	CER2 0603 X7R 16V	1N PM10 R	2955	223858615627	CER2 0603 X7R50V	2N2 PM10R	3218	319802135610	RST SM 0603	560R PM5 COL
2472	223878615649	CER2 0603 X7R 16V	1N PM10 R	2956	223886715221	CER1 0603 NP050V	220P PM5 R	3219	319802135610	RST SM 0603	560R PM5 COL
2473	223878615649	CER2 0603 X7R 16V	1N PM10 R	2957	203803500037	ELCAP SM	16VS 47U PM20 A	3220	319802135610	RST SM 0603	560R PM5 COL
2475	223878615649	CER2 0603 X7R 16V	1N PM10 R	2958	223878615649	CER2 0603 X7R16V	1N PM10 R	3301	319802137590	RST SM 0603	75R PM5 COL
2476	223878615649	CER2 0603 X7R 16V	1N PM10 R	2961	203803500038	ELCAP SM	16VS 1U PM20 A	3302	319802190030	RST SM 0603JUMP.	0R05 COL
2477	223878615649	CER2 0603 X7R 16V	1N PM10 R	2962	223886715221	CER1 0603 NP050V	220P PM5 R	3303	212211806104	RST SM 0603RC0603	137R PM1
2478	223878615649	CER2 0603 X7R 16V	1N PM10 R	2963	223878615649	CER2 0603 X7R16V	1N PM10 R	3304	319802131010	RST SM 0603	1R PM5 COL
2479	223878615649	CER2 0603 X7R 16V	1N PM10 R	2964	223878615649	CER2 0603 X7R16V	1N PM10 R	3305	319802137590	RST SM 0603	75R PM5 COL
2480	223878615649	CER2 0603 X7R 16V	1N PM10 R	2965	203801700339	ELCAP	16V S 10U P50M10 R	3306	319802190030	RST SM 0603JUMP.	0R05 COL
2481	223878615649	CER2 0603 X7R 16V	1N PM10 R	2966	223891615641	CER2 0603 X7R25V	22N PM10R	3307	212211806104	RST SM 0603RC0603	137R PM1
2482	223878615649	CER2 0603 X7R 16V	1N PM10 R	2969	223891615641	CER2 0603 X7R25V	22N PM10R	3308	319802137590	RST SM 0603	75R PM5 COL
2483	223878615649	CER2 0603 X7R 16V	1N PM10 R	2970	203801750406	ELCAP SM	16VS 4U7 PM20 B	3309	319802190030	RST SM 0603JUMP.	0R05 COL
2484	223878615649	CER2 0603 X7R 16V	1N PM10 R	2971	223891615649	CER1 0603 NP025V	1N PM5 R	3310	319802131030	RST SM 0603	10K PM5 COL
2485	223878615649	CER2 0603 X7R 16V	1N PM10 R	2972	223886715221	CER1 0603 NP050V	220P PM5 R	3311	212211806104	RST SM 0603RC0603	137R PM1
2486	223878615649	CER2 0603 X7R 16V	1N PM10 R	2973	203803500037	ELCAP SM	16VS 47U PM20 A	3312	319802131510	RST SM 0603	150R PM5 COL
2487	223878615649	CER2 0603 X7R 16V	1N PM10 R	2974	223858615632	CER2 0603 X7R50V	4N7 PM10R	3313	319802131510	RST SM 0603	150R PM5 COL
2488	223878615649	CER2 0603 X7R 16V	1N PM10 R	2975	223878615649	CER2 0603 X7R16V	1N PM10 R	3315	319802131010	RST SM 0603	1R PM5 COL
2489	223878615649	CER2 0603 X7R 16V	1N PM10 R	2976	223858615632	CER2 0603 X7R50V	4N7 PM10R	3316	319802131030	RST SM 0603	10K PM5 COL
2491	223878615649	CER2 0603 X7R 16V	1N PM10 R	2977	203803500038	ELCAP SM	16VS 1U PM20 A	3317	319802132220	RST SM 0603	2K2 PM5 COL
2492	223878615649	CER2 0603 X7R 16V	1N PM10 R	2978	203801700339	ELCAP	16V S 10U P50M10 R	3318	319802132210	RST SM 0603	220R PM5 COL
2502	222224119876	CER2 1206 Y5V 10V	10U P8020R	2979	223886715221	CER1 0603 NP050V	220P PM5 R	3319	319802132220	RST SM 0603	2K2 PM5 COL
2503	222224119876	CER2 1206 Y5V 10V	10U P8020R	2980	223858615627	CER2 0603 X7R50V	2N2 PM10R	3320	319802131010	RST SM 0603	1R PM5 COL
2505	222224119876	CER2 1206 Y5V 10V	10U P8020R	2982	223891615641	CER2 0603 X7R25V	22N PM10R	3321	319802132210	RST SM 0603	220R PM5 COL
2506	222291028854	CER2 0805 Y5V 25V	220N P8020	2983	223891615641	CER2 0603 X7R25V	22N PM10R	3322	319802190030	RST SM 0603JUMP.	0R05 COL
2507	222291028854	CER2 0805 Y5V 25V	220N P8020	2984	223878615649	CER2 0603 X7R16V	1N PM10 R	3323	319802134720	RST SM 0603	4K7 PM5 COL
2508	222291028854	CER2 0805 Y5V 25V	220N P8020	2985	223878615649	CER2 0603 X7R16V	1N PM10 R	3325	319802134730	RST SM 0603	4K7 PM5 COL
2511	222291028854	CER2 0805 Y5V 25V	220N P8020	2987	203801750406	ELCAP SM	16VS 4U7 PM20 B	3327	319802131030	RST SM 0603	10K PM5 COL
2512	222291028854	CER2 0805 Y5V 25V	220N P8020	2991	202202000658	ELCAP SS	16VS 10U PM20 A	3328	319802131030	RST SM 0603	10K PM5 COL
2513	222291028854	CER2 0805 Y5V 25V	220N P8020	2991	203803500038	ELCAP SM	16VS 1U PM20 A	3329	319802131030	RST SM 0603	10K PM5 COL
2601	223886715331	CER1 0603 NP0 50V	330P PM5 R	3009	319802134720	RST SM 0603	4K7 PM5 COL	3331	319802131030	RST SM 0603	10K PM5 COL
2602	223886715331	CER1 0603 NP0 50V	330P PM5 R	3010	319802134730	RST SM 0603	47K PM5 COL	3332	319802131030	RST SM 0603	10K PM5 COL
2603	223886715331	CER1 0603 NP0 50V	330P PM5 R	3011	319802131030	RST SM 0603	10K PM5 COL	3338	319802131010	RST SM 0603	1R PM5 COL
2605	223886715331	CER1 0603 NP0 50V	330P PM5 R	3012	319802131030	RST SM 0603	10K PM5 COL	3339	319802131030	RST SM 0603	10K PM5 COL
2606	223886715229	CER1 0603 NP0 50V	22P PM5 R	3013	319802134730	RST SM 0603	47K PM5 COL	3342	319802132290	RST SM 0603	22R PM5 COL
2607	223886715331	CER1 0603 NP0 50V	330P PM5 R	3015	319802132230	RST SM 0603	22K PM5 COL	3345	319802190030	RST SM 0603JUMP.	0R05 COL
2608	223886715229	CER1 0603 NP0 50V	22P PM5 R	3017	319802134730	RST SM 0603	47K PM5 COL	3346	319802131030	RST SM 0603	10K PM5 COL
2609	223886715229	CER1 0603 NP0 50V	22P PM5 R	3018	319802190030	RST SM 0603JUMP.	0R05 COL	3349	235003510479	RST NETW SMARV24 4X	47RPM5
2611	223886715229	CER1 0603 NP0 50V	22P PM5 R	3019	319802132230	RST SM 0603	22K PM5 COL	3351	235003510479	RST NETW SMARV24 4X	47RPM5
2612	223886715229	CER1 0603 NP0 50V	22P PM5 R	3020	319802132210	RST SM 0603	220R PM5 COL	3352	235003510479	RST NETW SMARV24 4X	47RPM5
2613	202001293721	ELCAP SM RV2 16V	10U PM20	3021	319802134710	RST SM 0603	470R PM5 COL	3353	235003510479	RST NETW SMARV24 4X	47RPM5
2615	223886715229	CER1 0603 NP0 50V	22P PM5 R	3022	319802132230	RST SM 0603	22K PM5 COL	3355	235003510479	RST NETW SMARV24 4X	47RPM5
2616	223886715331	CER1 0603 NP0 50V	330P PM5 R	3023	212010592155	RST MOX 2W	RSS S 1R PM5 B	3356	319802132290	RST SM 0603	22R PM5 COL
2617	223886715331	CER1 0603 NP0 50V	330P PM5 R	3024	319802131220	RST SM 0603	1K2 PM5 COL	3357	319802134730	RST SM 0603	47K PM5 COL
2631	223886715101	CER1 0603 NP0 50V	1P PM5 R	3025	319802154710	RST SM 0805	470R PM5 COL	3358	319802134730	RST SM 0603	47K PM5 COL
2632	223886715229	CER1 0603 NP0 50V	22P PM5 R	3026	319802154710	RST SM 0805	470R PM5 COL	3359	319802134720	RST SM 0603	4K7 PM5 COL
2633	223886715101	CER1 0603 NP0 50V	1P PM5 R	3027	319802134720	RST SM 0603	4K7 PM5 COL	3361	319802134720	RST SM 0603	4K7 PM5 COL
2634	223886715331	CER1 0603 NP0 50V	330P PM5 R	3028	319802132240	RST SM 0603	220K PM5 COL	3362	319802131030	RST SM 0603	10K PM5 COL
2635	223886715229	CER1 0603 NP0 50V	22P PM5 R	3029	319802132240	RST SM 0603	220K PM5 COL	3366	319802132210	RST SM 0603	220R PM5 COL
2636	223886715331	CER1 0603 NP0 50V	330P PM5 R	3031	319802131540	RST SM 0603	150K PM5 COL	3369	235003510101	RST NETW SMARV24 4X1R	PM5
2637	223886715331	CER1 0603 NP0 50V	330P PM5 R	3032	319802132230	RST SM 0603	22K PM5 COL	3371	319802131010	RST SM 0603	1R PM5 COL
2638	223886715331	CER1 0603 NP0 50V	330P PM5 R	3033	319802131030	RST SM 0603	10K PM5 COL	3372	319802132290	RST SM 0603	22R PM5 COL
2639	223886715331	CER1 0603 NP0 50V	330P PM5 R	3035	319802132230	RST SM 0603	22K PM5 COL	3376	319802131090	RST SM 0603	10R PM5 COL
2641	223886715331	CER1 0603 NP0 50V	330P PM5 R	3036	319802132240	RST SM 0603	220K PM5 COL	3378	319802131090	RST SM 0603	10R PM5 COL
2642	223886715331	CER1 0603 NP0 50V	330P PM5 R	3037	319802131030	RST SM 0603	10K PM5 COL	3379	319802131090	RST SM 0603	10R PM5 COL
2643	223886715331	CER1 0603 NP0 50V	330P PM5 R	3038	319802131030	RST SM 0603	10K PM5 COL	3381	319802131090	RST SM 0603	10R PM5 COL
2644	223886715331	CER1 0603 NP0 50V	330P PM5 R	3040	212010592383	RST MOX 2W	RSS S 2R2 PM5	3382	235003510101	RST NETW SMARV24 4X1R	PM5
2681	319801631010	CER1 0603 NP0 50V	1P COL	3042	319802132230	RST SM 0603	22K PM5 COL	3383	235003510101	RST NETW SMARV24 4X1R	PM5
2682	319801631010	CER1 0603 NP0 50V	1P COL	3043	319802132220	RST SM 0603	2K2 PM5 COL	3384	235003510101	RST NETW SMARV24 4X1R	PM5
2683	319801731040	CER2 0603 X7R 16V	1N COL	3044	319802151010	RST SM 0805	1R PM5 COL	3385	235003510101	RST NETW SMARV24 4X1R	PM5
2686	222224119876	CER2 1206 Y5V 10V	10U P8020R	3045	319802133320	RST SM 0603	3K3 PM5 COL	3386	235003510101	RST NETW SMARV24 4X1R	PM5
2687	319801741050	CER2 0603 Y5V 10V	1U COL	3046	319802151590	RST SM 0805	15R PM5 COL	3387	235003510101	RST NETW SMARV2	

180MT10P LMT 59

7005	932215923668	IC SM LM2596SX-5.0	(NSC0) R
7011	932211529668	FET POW SM SI9433DY	(TEGO)
7012	933967310685	TRA SIG SMBC848C	(ONSE) R
7013	933967310685	TRA SIG SMBC848C	(ONSE) R
7016	932217562687	IC SM LD1085D2T33	(ST) L
7017	932211529668	FET POW SM SI9433DY	(TEGO)
7018	933967310685	TRA SIG SMBC848C	(ONSE) R
7021	932216888668	IC SM LM317D2T	(ST) R
7022	932216733668	IC SM LD1117S33	(ST) R
7023	933967310685	TRA SIG SMBC848C	(ONSE) R
7024	933967310685	TRA SIG SMBC848C	(ONSE) R
7025	934000504115	FET SIG SMSP126	(PHSE) R
7026	932217564687	IC SM L7805CD2T	(ST) L
7027	932217564687	IC SM L7805CD2T	(ST) L
7028	933967310685	TRA SIG SMBC848C	(ONSE) R
7030	932217563685	IC SM L78L05ACU	(ST) R
7031	933507970653	IC SM HEF4538BT	(PHSE) R
7032	933967310685	TRA SIG SMBC848C	(ONSE) R
7033	933967310685	TRA SIG SMBC848C	(ONSE) R
7035	933373070653	IC SM HEF4077BT	(PHSE) R
7036	933967310685	TRA SIG SMBC848C	(ONSE) R
7037	933967310685	TRA SIG SMBC848C	(ONSE) R

◀ Go to cover page



7038 933967310685 TRA SIG SMBC848C (ONSE) R
 7039 933967310685 TRA SIG SMBC848C (ONSE) R
 7041 933967310685 TRA SIG SMBC848C (ONSE) R
 7042 933967310685 TRA SIG SMBC848C (ONSE) R
 7051 932216888668 IC SM LM317D2T (ST) R
 7052 932216732668 IC SM LD1117S25 (ST) R
 7201 935256600112 IC SM P80C51RA+4A (PHSE) L
 7202 932212662682 IC M24C16-BN6 (ST) L
 7203 932217680682 IC M29F010B-90P1 (ST) L
 7205 935218650118 IC SM 74LVC373APW (PHSE) R
 7206 932216554668 IC SM 74LCX139T (ST) R
 7301 932214526668 IC SM M24C02-WMN6 (ST) R
 7321 935260739118 IC SM 74LVC14APW (PHSE) R
 7322 932217743685 IC SM LM810M3-4.0 (NSC0) R
 7323 933714830653 IC SM 74HC4052D (PHSE) R
 7331 932217970671 IC SM JAGASM (SAGE) Y
 7351 933967310685 TRA SIG SMBC848C (ONSE) R
 7361 932216677682 IC SM M12L16161A-7T (ESMT) L
 7362 932216677682 IC SM M12L16161A-7T (ESMT) L
 7363 932216677682 IC SM M12L16161A-7T (ESMT) L
 7401 935267395518 IC SM SAA7118E/V1 (PHSE) R
 7402 933967310685 TRA SIG SMBC848C (ONSE) R
 7403 933967310685 TRA SIG SMBC848C (ONSE) R
 7405 933967310685 TRA SIG SMBC848C (ONSE) R
 7406 933967310685 TRA SIG SMBC848C (ONSE) R
 7407 933967310685 TRA SIG SMBC848C (ONSE) R
 7408 933967310685 TRA SIG SMBC848C (ONSE) R
 7409 933967310685 TRA SIG SMBC848C (ONSE) R
 7410 935209280118 IC SM 74LVT86D (PHSE) R
 7411 319801043360 TRA SIG SMPMBT2369 (COL) R
 7412 319801043360 TRA SIG SMPMBT2369 (COL) R
 7413 319801043360 TRA SIG SMPMBT2369 (COL) R
 7415 319801043360 TRA SIG SMPMBT2369 (COL) R
 7431 932216733668 IC SM LD1117S33 (ST) R
 7451 932216918671 IC SM FLI22 (SAGE) Y
 7471 932217603668 IC SM K4S643232E-TC50(SMGK)
 7503 932217686668 IC SM THC63LVDM83A (THIN) R
 7505 932217686668 IC SM THC63LVDM83A (THIN) R
 7621 933967310685 TRA SIG SMBC848C (ONSE) R
 7901 935172510112 IC TDA1308/N1 (PHSE) L
 7903 823827712241 IC PT2399 L
 7904 823827712241 IC PT2399 L
 7905 933510720686 IC MC78L05ACP (MOTA) R
 7906 933221960126 TRA SIG BC638 (PHSE) A
 7907 932209011673 TRA SIG BC548C (KEC0) A
 7911 932209011673 TRA SIG BC548C (KEC0) A
 7912 932210142676 TRA SIG BC558C (KEC0) A
 7913 932209011673 TRA SIG BC548C (KEC0) A
 7914 932210142676 TRA SIG BC558C (KEC0) A
 7921 933237790126 TRA SIG BC547C (PHSE) A
 7922 932209011673 TRA SIG BC548C (KEC0) A
 7923 932209011673 TRA SIG BC548C (KEC0) A
 7924 932209011673 TRA SIG BC548C (KEC0) A
 7931 935261847112 IC TDA1517/N3 (PHSE) L
 7991 933553530676 TRA SIG TBC548C (TOSJ) A
 7992 933553530676 TRA SIG TBC548C (TOSJ) A
 7996 933510720686 IC MC78L05ACP (MOTA) R
 7997 933553530676 TRA SIG TBC548C (TOSJ) A



GENERAL PRODUCT SPECIFICATION

- . 18.1 LCD monitor with TV function.
- . PC 15 pins D-SUB analog interface.
- . TV Tuner, S-Video with L/R RCA Audio in.
- . SCART (RGB, AV) input interface (for Europe model)
- . Cinch input (YUV, AV) input interface (for NAFTA, AP model)
- . PC audio line in, and headphone out interface
- . L/R audio line output.
- . NTSC, PAL, SECAM TV system.
- . 100 Pages Teletext (Europe) and Closed caption, V-chip (NAFTA)
- . Video on PC graphic picture in picture feature
- . PC graphic auto picture adjustment
- . 17 user modes
- . User friendly OSD menu
- . User friendly remote controller
- . DDC2B communication capability
- . MAX. resolution 1280 x 1024 non-interface at 75 Hz
- . SXGA 18.1 color TFT LCD flat panel
- . Easy tilt and swivel base
- . Full range power supply adapter 90 ~ 264 VAC
- . CE environmental policy
- . Anti-glare to reduce light reflection
- . Power management capability
- . TCO 95
- . VESA standard wall mount kit (option)

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 1
TY		CHECK		10	A4
DATE		2002-05-06		Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

JEM 100 (5/04)



CONTENTS

- 1.0 Foreword
- 2.0 Product profile
- 2.1 LCD
- 2.2 Scanning frequencies
- 2.3 Video dot rate
- 2.4 Power input
- 2.5 Power consumption
- 2.6 Dimensions
- 2.7 Weight
- 2.8 Functions
- 2.9 Ambient temperature
- 2.10 Regulatory compliance
- 3.0 Electrical characteristics
- 3.1 Interface signals cables
- 3.2 User interface
 - 3.2.1 Front control panel
 - 3.2.2 Front control panel definition
 - 3.2.3 PC signal control via front key
 - 3.2.4 TV signal control via front key and RC control
 - 3.2.4.1 Remote control function
 - 3.2.4.2 Remote control key definition
 - 3.2.4.3 TV OSD control function
 - 3.2.5 PC signal timing requirement and TV system requirement
 - 3.2.6 PC interface
 - 3.2.6.1 Mode storing capacity
 - 3.2.6.2 Available timings
 - 3.2.6.3 Horizontal scanning
 - 3.2.6.4 Vertical scanning
 - 3.2.7 TV interface
- 3.4 Power input connection
- 3.5 Power management
- 3.6 Display identification
- 4.0 Visual characteristics
 - 4.1 Test conditions
 - 4.2 Resolution
 - 4.3 Brightness

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 2
TY		CHECK		10	A4
DATE		2002-05-06		Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

JEM 100 (5/04)

GENERAL PRODUCT SPECIFICATION

180MT10P LMT 63

Go to cover page

PHILIPS



- 4.4 Image size
 4.4.1 Actual display size
 4.5 Brightness uniformity
 4.6 PC white color adjustment
 4.7 TV white color adjustment
 4.8 TV picture centering
- 5.0 Mechanical characteristics
 5.1 Controls
 5.2 Unit dimension / weight
 5.3 Tilt and swivel base
 5.4 Transportation packages
 5.4.1 Shipping dimension / weight
 5.4.2 Block unit / palletization
- 6.0 Environmental characteristics
 6.1 Susceptibility of display to external environment
 6.2 Transportation tests
 6.3 Display disturbances from external environment
- 7.0 Reliability
 7.1 Mean time between failures
 8.0 Quality assurance requirements
 8.1 Acceptance test
 9.0 Serviceability

All rights strictly reserved. Reproduction or issue
 to third parties in any form whatsoever is not permitted
 without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 3 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 101 05424

64 180MT10P LMT

Go to cover page

GENERAL PRODUCT SPECIFICATION

PHILIPS



- 1.0 FOREWORD
 This specification describes a 18.1" SXGA multi-scan color Super-TFT LCD Monitor/TV with max. resolution upto 1280X1024/75Hz non-interlaced.
- 2.0 PRODUCT PROFILE
 Philips 18.1" TFT LCD monitor/TV can connect to PC with analog D-SUB, and has TV, Video interface with integrated base.
 Meet world wide five major TV system:
 West Europe, East Europe, NAFTA, Asia Pacific and China.
- 2.1 LCD
 Type NR. : TX46D14VC0HAB
 Dimensions : 18.1
 Pitch (mm) : 0.2805mm
 Color pixel arrangement: RGB vertical stripes
 Display surface : Antiglare
 Number of color : 16.7M (8 bits / color)
 Backlight : 8 CCFL
 Active area (WxH) : 359.0 mm x 287.2 mm
 Viewing angle : CR>=10
 Typical : Vertical : 170 , Horizontal : 170
- Contrast ratio : Typical 300.
 Luminance of white : Typical 300 Nits.
- 2.2 Scanning frequencies
 Hor. : 30 - 80KHz Ver. : 56 - 75 Hz
- 2.3 Video dot rate : < 135 MHz
- 2.4 Power input : 90 - 264 Vac, 50/60 2Hz
 : Adapter 12 +/- 1V 6.0A output
- 2.5 Power consumption : typ 68 W
- 2.6 Dimensions : 452 mm W X 452 mm H X 200 mm D
- 2.7 Weight : 6.3 Kg
- 2.8 Functions :
 15 pins D-sub analog interface.
 Tuner, S-video (video and RCA audio jack), SCART (Europe model), Cinch (NAFTA, AP model), PC audio line in input, Headphone output interface
 And line out.
- 2.9 Ambient temperature : 0 - 35°C
- 2.10 Regulatory compliance :
 FCC, EPA, UL, CSA, TUV/GS, TUV/ERG, CE, C-Tick, SEMKO, TCO95, Nutek,
 MPRII, BSMI, PSB, CB, PZ1, ISO13406-2.
 EN60950/IEC60950,
 EN55013, EN55020, EN55022, EN55024, EN60555-2, EN61000-3-2

All rights strictly reserved. Reproduction or issue
 to third parties in any form whatsoever is not permitted
 without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 4 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 101 05424



3.0 Electrical characteristics

3.1 Interface signals cables

VGA Interface Cable (for all model)
Length : 1.8M +/- 50mm

Stereo RCA audio cable (option)
Length : 1.5M +/- 50mm

S-video cable (option)
Length : 1.5M +/- 50mm

SCART cable (option)
Length : 1.5M +/- 50mm

YCbCr cable (option)
Length : 1.5M +/- 50mm

AV cable (option)
Length : 1.5M +/- 50mm

Mini Jack stereo cable (for all model)
Length : 1.5M +/- 50mm

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

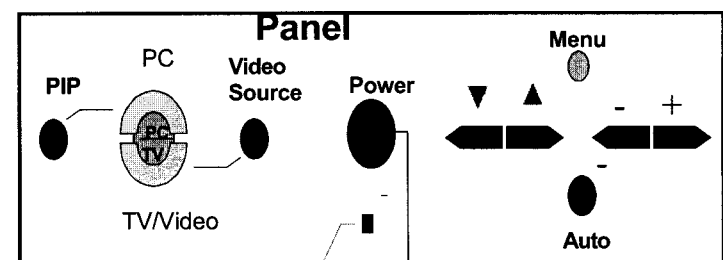
CLASS NO.		18.1" TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS.	36	590	— 5 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 100 05424

3.1 User interface
On screen display user control via front keypad (PC and TV OSD) and remote control for TV.

3.2.1 Front control panel

Front Control



It's Top/Down LED will be switched by pushing

CLASS NO.		18.1" TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS.	36	590	— 6 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 100 05424

PHILIPS



3.2.2 Front control panel definition :

PIP : PIP enable/disable and size select (active in PC mode).
 PC/TV : PC/TV select key.
 PC/TV LED: PC/TV status.
 Video Source: AV source select key.
 Power: Power switch.
 Power LED: Normal operation green. Sleeping mode green with blanking.
 IR receiver.
 -CH-: Channel up and down, and OSD cursor up and down.
 -Vol-: Volume up and down, and OSD cursor left and right.
 Auto : Auto adjust PC H,V size and position and video phase and clock.
 Menu: Enable OSD menu (enter key for PC).

All rights strictly reserved. Reproduction or issue
 to third parties in any form whatsoever is not permitted
 without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 7 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 100 05424

PHILIPS



3.2.3 PC Signal control via front keyboard:

Language : ENGLISH , ESPANOL , FRANCAIS , DEUTSCH , ITALIANO
 Adjust position: H-position, V-position.

Brightness and contrast: Lamps brightness and PC graphic contrast adjustment.

Video noise : Phase adjustment, Clock adjustment

Adjust color : Original panel color , 9300K for CAD/CAM use
 6500k for image management, User color red, green and blue color adjustable.

OSD settings : OSD H,V position settings

Product information : Serial number and timing information

Rest to factory setting : Reset brightness, contrast, positions, phase, clock to factory settings.

Picture in picture : Adjust PIP size and position.
 Select the PIP audio source.

All rights strictly reserved. Reproduction or issue
 to third parties in any form whatsoever is not permitted
 without written authority from the proprietor.

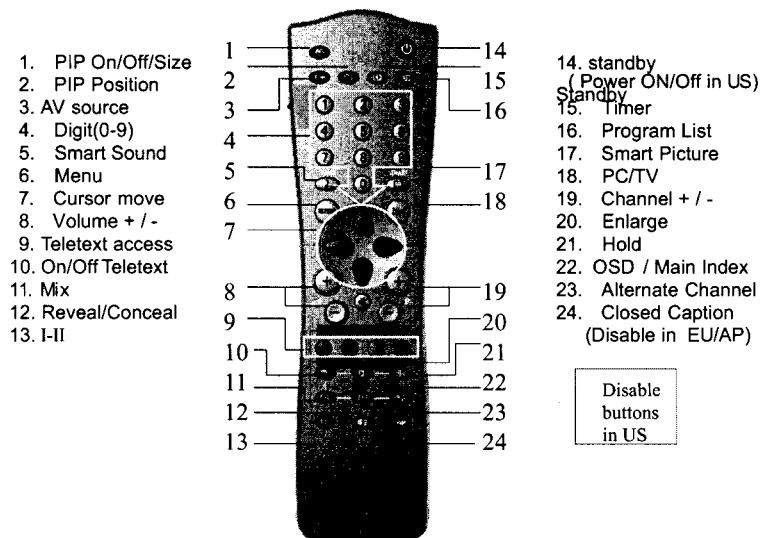
CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 8 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 100 05424



3.2.4 TV Signal control via front keyboard and RC control:

3.2.4.1 Remote control function



All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME: Robert Lin	SUPERS	36	590	— 9	10 A4
TY	CHECK	DATE: 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.		

2006 180 05464



3.2.4.2 Remote control key definition

1. PIP On/Off and size
- PIP position
- Press source select key to select EXT, S-Video and TV (AV, CVI, S-Video and TV for Nafta)
- Digital number: For direct access to programs. For a 2 digit program number, the 2nd digit must be entered before the dash disappears.
- Smart sound: To access a series of settings: VOICE, MUSIC, THEATRE and return to PERSONAL
- Menu: To display or exit from the menus
- Cursor: These 4 keys are used to move within the menus
- Mute : To disable or enable the sound.
- Volume: To adjust the sound level
- Teletext Access: Coloured zones are displayed at the bottom of the screen. The 4 coloured keys give access to the corresponding subjects or pages. (Disable in Nafta)
- The coloured zones flash when the subject or the page is not yet available.
- On/off teletext: To call up or exit from teletext. When first pressed, the main index page appears with a list of the items available. Each page has a corresponding 3-figure number. If the selected channel does not broadcast teletext, 100 will appear and the screen will remain blank (in this case, exit from teletext and choose another channel). (Disable in NAFTA)
- Mix: Overlaying text on the TV picture To activate or deactivate screen overlay.
- Reveal/Conceal: Use this key to reveal/conceal hidden information (answers to puzzles). (Disable in NAFTA)
- I-II: Double page teletext
- To activate or deactivate the double page teletext display mode. The active page is displayed on the left and the following page is displayed on the right. Press hold if you want to hold a page (i.e. the contents page). The active page is then displayed on the right. To return to normal mode. Press I-II. Stereo, Mono, Sap sound select.
- Standby (power on/off key in US): To set the TV to standby mode. To switch the TV set on again press P +/- or 0..9.
- Timer: To select the length of time before the set automatically switches to standby (from 0 to 240 minutes)
- Program list: To display/clear the list of programs. Use the keys up/down select a program and the key right display it. The symbol locked is displayed alongside all program which are locked or unlocked symbol means if they are not locked.
- Smart picture: To access a series of settings: RICH, NATURAL, SOFT, MULTIMEDIA and return to PERSONAL.
- (Movies, sports, weak signal, multimedia and personal setting for Nafta)
- PC/TV: PC/TV function select key.
- Channel +/-
- Enlarge: Page enlargement Press this key to display the upper, then lower part of the screen, and then to return to the normal page size. (Disable in NAFTA)
21. Hold : Hold a Page. (Disable in NAFTA)
22. OSD/Main index: Screen information To display / remove the program number, the name (if it exists), the time, the sound mode and the time remaining on the timer. Hold down for 5 seconds to permanently display the programme number on the

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME: Robert Lin	SUPERS	36	590	— 10	10 A4
TY	CHECK	DATE: 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.		

2006 180 05464



screen. The volume level and the smart control adjustments are then displayed each time they are used.

23. Alternate channel: To access the previously viewed program
24. Close caption: Closed caption selection. (disable in EE/WE/AP/CN)

3.2.4.3 TV OSD control function

Auto Install

For Europe:

The first time you switch on the television, use the autostore function in the OSD to start the tuning. The operation takes several minutes.

A display shows the search status and the number of programs found. When it has finished the menu disappears.

To exit or interrupt the search, press the menu key.

1. If the transmitter or the cable network broadcasts the automatic sort signal, the programs will be correctly numbered.

2. If not, the programs found will be numbered in descending order starting at 99, 98, 97, etc.

Use the SORT menu to renumber them.

Some transmitters or cable networks broadcast their own sort parameters (region, language, etc.).

Where this is the case, make your choice using the Up down keys and confirm with right key.

For Nalta:

Select the tuner mode in OSD menu for cable, antenna or auto select. Use the autoprogram function to search channel.

All rights strictly reserved. Reproduction or use to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 11 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 100 05424



Sort the programs

For Europe:

1. Press the menu key. The main menu is displayed.

2. Select INSTALL (down key), then press right key.

The INSTALL menu appears.

3. Using the down key, select SORT then press right key.

The SORT menu appears. The FROM option is activated.

Note: this menu works as follows:

Change "FROM" (enter the current program number),

"TO" (enter the new number),

EXCHANGE numbers" (the operation is carried out).

4. Select the program you wish to renumber using left right keys or 0 to 9.

Example: to renumber program 78 as 2 press 78.

(Select TO (using down key) and enter the new number with left right keys or 0 to 9 (for the example given, enter 2).

6. Select EXCHANGE (down key) and press right.

The message EXCHANGED appears, the

exchange takes place. In our example,

program 78 is renumbered as 2 (and

program 2 as 78).

7. Select the option FROM (up key) and repeat

stages 4 to 6 as many times as there are

programs to renumber.

8. To exit from the menus, press OSD key.

For Nalta:

Use Channel edit function to skip or enable the channel

All rights strictly reserved. Reproduction or use to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 12 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2006 100 05424

PHILIPS

Select language and country

For Europe:

1. Press the menu key to display the main menu.
2. Select INSTALL (down), then press right. The INSTALL menu appears.
- The LANGUAGE option is activated.
- 3 Press right to go into the LANGUAGE menu.
- 4 Select your language with the up down keys. The menu will appear in the chosen language.
- 5 Press left to exit the LANGUAGE menu.
- 6 Select the option COUNTRY and press right.
- 7 Select your country with up down keys. If your country does not appear in the list, select OTHER.
- 8 Press right to exit the COUNTRY menu.
- 9 To exit from the menus, press OSD.

For Nafta:

User can select language.

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 13 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2002-10-11 US404

PHILIPS

Automatic tuning

For Europe:

This menu allows you to automatically search for all the programs available in your region (or on your cable network).

1. First carry out operations 1 to 8 above, then:
- 2 Press down once to select AUTO STORE then press right. The search begins.

After several minutes, the INSTALL menu reappears automatically.

3. If the transmitter or the cable network broadcasts the automatic sort signal, the programs will be correctly numbered.

4. If not, the programs found will be numbered in descending order starting at 99, 98, 97, etc.

Use the SORT menu to renumber them.

Some transmitters or cable networks broadcast their own sort parameters (region, language, etc.). Where this is the case, make your choice using the Up down keys and confirm with right.

To exit or interrupt the search, press the menu key.

6. To exit from the menus, press OSD.

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 14 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

2002-10-11 US404

PHILIPS

**Manual tuning**

For Europe:

This menu allows you to store the programs one by one.

1. Press menu.
2. Select INSTALL (down), then press right. The INSTALL menu appears.
3. Select MANUAL STORE (down) then press right.

The menu appears:

4. Press right to go to the SYSTEM menu.

Use up/down to choose EUROPE (automatic detection*) or manual detection with WEST EUR (standard BG reception), EAST EUR (standard DK reception), UK (standard I reception) or FRANCE (standard LL').

Then press left to exit from the menu.

* Except for France (standard LL'): select the option FRANCE.

5. Select SEARCH and press right.

The search begins. As soon as a program is found, the search will stop. If you know the frequency of the program required, enter its number directly using the 0-9 keys and go to step 7.

6. If reception is unsatisfactory, select FINE

TUNE and hold down left or right key.

7. Select PROG.NO (program number) and

use the left/right or 0 to 9 keys to enter the desired number.

8. Select STORE and press right. The message

STORED appears. The program is stored.

9. Repeat steps 5 to 8 for each program to be stored.

To exit: press the OSD key.

For Nafta:

Manual function allows user to fine tune the frequency.

CLASS NO.

18.1" TFT SXGA LCD Monitor / TV

TYPE : 180MT10P/00C

BRAND : PHILIPS

8639 000 12344

2002-05-06

NAME Robert Lin

SUPERS

36

590

15

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 100 05421

PHILIPS

**Program Name**

You may, if you wish, give a name to the first 40 programs (from 1 to 40).

1. Press menu.
2. Select INSTALL (down), then press right. The INSTALL menu appears.
3. Press down 5 times to select NAME (concealed at the bottom of the screen), then press right.

The menu appears:

4. Select the program you wish to name using the keys 0-9 or - P+.

Note: at the time of installation, the programs are automatically named when the identification signal is transmitted.

5. Use the keys left/right to move within the name display area (5 characters).

6. Use keys up/down to choose the characters.

7. Press menu when the name has been entered.

The program name is stored.

8. Repeat steps 4 to 7 for each program to be named.

9. To exit from the menus, press OSD.

CLASS NO.

18.1" TFT SXGA LCD Monitor / TV

TYPE : 180MT10P/00C

BRAND : PHILIPS

8639 000 12344

2002-05-06

NAME Robert Lin

SUPERS

36

590

16

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 100 05421

PHILIPS

**Adjust the picture**

1. Press menu then right. The PICTURE menu appears:
2. Use up/down keys to select a setting and left/right keys to adjust.
Note: the menu is a scroll-down menu.
Keep the key down held down to access the settings hidden at the bottom of the screen.
3. Once the necessary adjustments have been made, select the option STORE and press right to store them.
4. To exit from the menus, press menu.

Description of the settings:

BRIGHTNESS: alters the brightness of the image.

COLOUR: alters the color intensity.

CONTRAST (PICTURE at Nafta): alters the variation between light and dark tones.

SHARPNESS: alters the crispness of the image.

STORE: stores the picture settings. (No this function in Nafta)

TINT: Alters the skin color. (No this function in PAL)

COLOUR TEMP (color temperature):

adjusts the color temperature of the picture. Three options are available here:

COOL (blue white), NORMAL (balanced) or WARM (red white).

IMAGEMAX: Enhance the picture contrast. (No this function at Europe)

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV			
		TYPE : 180MT10P/00C		8639 000 12344	
2002-05-06		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	17 10 A4
TY		CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

FORM 100 (5/02)

PHILIPS

**Adjust the sound**

1. Press menu, select the SOUND function (down key) and press right key. The SOUND menu appears :
2. Use up/down keys to select a setting and left/right keys to adjust.
Note: to access the AVL setting (hidden at the bottom of the screen) hold down down key.
3. Once the necessary adjustments have been made, select the option STORE and press right to store them.
4. To exit from the menus, press OSD key.

Description of the settings:

TREBLE: alters the level of the high frequency sound.

BASS: alters the level of the low frequency sound.

BALANCE: to balance the sound between the left and right speakers.

DELTA VOLUME (volume difference): allows you to compensate for the volume differences between the different programs or the EXT inputs. This setting is available for programs 1 - 40 and the EXT sockets. (for Europe)

STORE: stores the sound settings.

AVL (Automatic Volume Leveller): automatic volume control used to avoid sudden increases in volume, particularly when changing programs or during advertisements

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV			
		TYPE : 180MT10P/00C		8639 000 12344	
2002-05-06		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	18 10 A4
TY		CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

FORM 100 (5/02)

PHILIPS



All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

Timer Function

This menu allows you to use your TV as an alarm clock.

1. Press menu.
 2. Select FEATURES (down) and press right twice. The TIMER menu appears.
 3. Press right to enter and exit the sub-menus and use keys up/down to adjust.
 4. TIME: enter current time.
- Note: the time is updated automatically each time the set is switched on using teletext information taken from program 1. If program 1 does not have teletext, the update will not take place.
5. START TIME: enter the start time.
 6. STOP TIME: enter the stop time.
 7. PROG: NO: enter the number of the program required.
 8. ACTIVATE: you can set the alarm to be activated:
 - ONCE ONLY for a one-off alarm,
 - DAILY for a daily alarm or
 - STOP to cancel.

9. Press standby to set the TV to standby. It will automatically switch on at the time programmed. If you leave the TV switched on, it will only change program at the time indicated. The combination of the CHILD LOCK and TIMER functions may be used to limit the length of time your television is in use, for example, by your children.

CLASS NO.		18.1" TFT SXGA LCD Monitor/ TV			
		TYPE : 180MT10P/00C		8639 000 12344	
		BRAND : PHILIPS			
2002-05-06					
NAME Robert Lin	SUPERS	36	590	19	10
TY	CHECK	DATE 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.		

2006 130 05424

PHILIPS



All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

Locking Set

For Europe:

You can bar access to certain programs or completely lock the set by locking the keys.

Locking programs

1. Press menu.
 2. Select FEATURES (down) and press right.
 3. Select PARENTAL CONT. (down) and press right.
 4. Enter your confidential access code. The first time, enter the code 0711 then confirm by re-entering 0711. The menu appears.
 5. Press right to go into the menu.
 6. Use keys up/down to select the required program and confirm with right. The symbol is displayed alongside the programs or sockets that have been locked.
- Press OSD to exit.

To watch a program which has been locked

You will now need to enter the confidential code; otherwise the screen will remain blank. The INSTALL menu access is also locked. Caution: in the case of encrypted programs which use an external decoder, it is necessary to lock the corresponding EXT socket.

To unlock all programs

Repeat stages 1 to 4 above, then select CLEAR ALL and press right. To change the confidential code Repeat stages 1 to 4 above, then:

5. Select CHANGE CODE and enter your own 4-digit number.
6. Confirm by entering it again.

Your new code will be stored.

7. Press OSD to exit from the menus.

If you have forgotten your confidential code, enter the universal code 0711 twice.

Locking the keys

1. Press menu, select FEATURES (down) and press right.
2. Select CHILD LOCK (down) and press right to set the lock to ON.
3. Switch off the set and put the remote control out of sight.

CLASS NO.		18.1" TFT SXGA LCD Monitor/ TV			
		TYPE : 180MT10P/00C		8639 000 12344	
		BRAND : PHILIPS			
2002-05-06					
NAME Robert Lin	SUPERS	36	590	20	10
TY	CHECK	DATE 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.		

2006 130 05424

The set cannot be used (it can only be switched on using the remote control).
4. To cancel: switch CHILD LOCK to OFF.

For Nafta:
The universal code is same as Europe.
Use auto lock function to select V-chip function.
Use Closed Capto select caption mode.

3.3 PC signal timing requirement and TV system requirement

3.3.1 PC interface

3.3.1.1 Mode storing capacity
User modes : 17

3.3.1.2 Available timings
Factory pre-set timing, size and centering are according to the reference timing charts.

All rights strictly reserved. Reproduction or issue to third parties in any form, without written permission, is prohibited.

CLASS NO.

18.1" TFT SXGA LCD Monitor/ TV
TYPE : 180MT10P/00C
BRAND : PHILIPS

8639 000 12344

NAME Robert Lin

SUPERVISOR

36

590

21

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 100 15424

MODE NO.	1	* 2	* 3	4
RESOLUTION	640 x 350	720 x 400	640 x 480	640x480
Dot clock(MHz)	25.175	28.321	25.175	30.240
f h	31.469kHz	31.469kHz	31.469kHz	35.0kHz
A (us)	31.78(800 dots)	31.78(900dots)	31.778 (800 dots)	28.571(864 dots)
B (us)	3.813(96 dots)	3.813(108dots)	3.813 (96 dots)	2.116(64 dots)
C (us)	1.907(48 dots)	1.907(54dots)	1.907 (48 dots)	3.175(96 dots)
D (us)	25.42(640 dots)	25.42(720dots)	25.422 (640 dots)	21.164(640 dots)
E (us)	0.636(16 dots)	0.636(18dots)	0.636 (16 dots)	2.116(64 dots)
f v	70Hz(70.09)	70Hz(70.087)	60Hz (59.940)	66.7 HZ(66.667)
O (ms)	14.27(449 lines)	14.27(449 lines)	16.683 (525 lines)	15.000(525 lines)
P (ms)	0.064(2 lines)	0.064(2 lines)	0.064 (2 lines)	0.086(3 lines)
Q (ms)	1.875(59 lines)	1.080(34 lines)	1.049 (33 lines)	1.114(39 lines)
R (ms)	11.12(350 lines)	12.71(400 lines)	15.253 (480 lines)	13.714(480 lines)
S (ms)	1.208(38 lines)	0.413(13 lines)	0.317 (10 lines)	0.086(3 lines)
SYNC. H/V	+/ -	- / +	- / -	+/ +
POLARITY				Or - / -
SEP. SYNC	Y	Y	Y	Y

MODE NO.	5	* 6	7	8
RESOLUTION	640 x 480	640 x 480	800 x 600	800 x 600
Dot clock(MHz)	31.500	31.500	36.000	40.000
f h	37.861kHz	37.500kHz	35.156kHz	37.879kHz
A (us)	26.413(832 dots)	26.667 (840 dots)	28.44 (1024 dots)	26.40 (1056 dots)
B (us)	1.270(40 dots)	2.032 (64 dots)	2.000 (72 dots)	3.200 (128 dots)
C (us)	4.064(128 dots)	3.810 (120 dots)	3.556 (128 dots)	2.200 (88 dots)
D (us)	20.317(640 dots)	20.317 (640 dots)	22.22 (800 dots)	20.00 (800 dots)
E (us)	0.508(16 dots)	0.508 (16 dots)	0.667 (24 dots)	1.000 (40 dots)
f v	72.809Hz	75Hz (75)	56Hz (56.25)	60Hz (60.316)
O (ms)	13.735(520 lines)	13.333 (500 lines)	17.78 (625 lines)	16.58 (628 lines)
P (ms)	0.079(3 lines)	0.080 (3 lines)	0.057 (2 lines)	0.106 (4 lines)
Q (ms)	0.739(28 lines)	0.427 (16 lines)	0.626 (22 lines)	0.607 (23 lines)
R (ms)	12.678(480 lines)	12.80 (480 lines)	17.07 (600 lines)	15.84 (600 lines)
S (ms)	0.023(1 lines)	0.027 (1 line)	0.028 (1 line)	0.026 (1 line)
SYNC. H/V	- / -	- / -	+ / +	+ / +
POLARITY				
SEP. SYNC	Y	Y	Y	Y

A : H-Total
B : H- Sync width
C : H- Back porch
D : H- Video width
E : H- Front porch

O : V-Total
P : V- Sync width
Q : V- Back porch
R : V- Video length
S : V- Front porch

CLASS NO.

18.1TFT SXGA LCD Monitor/ TV
TYPE : 180MT10P/00C
BRAND : PHILIPS

8639 000 12344

NAME Robert Lin

SUPERVISOR

36

590

22

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 100 15424

GENERAL PRODUCT SPECIFICATION

180MT10P LMT 83

Go to cover page

PHILIPS



MODE NO.	9	* 10	11	* 12
RESOLUTION	800 x 600	800 x 600	832 x 624	1024 x 768
Dot clock(MHz)	50.000	49.500	57.280	65.000
f h	48.077kHz	46.875kHz	49.722kHz	48.363kHz
A (us)	20.80 (1040dots)	21.333 (1056dots)	20.11 (1152dots)	20.677(1344 dots)
B (us)	2.400 (120 dots)	1.616 (80 dots)	1.117 (64 dots)	2.092(136 dots)
C (us)	1.280 (64 dots)	3.232 (160 dots)	3.911 (224 dots)	2.462(160 dots)
D (us)	16.00 (800 dots)	16.162 (800 dots)	14.52 (832 dots)	15.754(1024 dots)
E (us)	1.120 (56 dots)	0.323 (16 dots)	0.559 (32 dots)	0.369(24 dots)
f v	72Hz (72.188)	75Hz (75.000)	75Hz (74.546)	60.004Hz
O (ms)	13.85 (666 lines)	13.333 (625lines)	13.41 (667 lines)	16.666(806 lines)
P (ms)	0.125 (6 lines)	0.064 (3 lines)	0.060 (3 lines)	0.124(6 lines)
Q (ms)	0.478 (23 lines)	0.448 (21 lines)	0.784 (39 lines)	0.600(29 lines)
R (ms)	12.48 (600lines)	12.80 (600lines)	12.55 (624 lines)	15.880(768 lines)
S (ms)	0.770 (37 line)	0.021 (1 line)	0.020 (1 lines)	0.062(3 lines)
SYNC. H/V	+ / +	+ / +	+ / +	- / -
POLARITY				
SEP. SYNC	Y	Y	Y	Y

MODE NO.	13	* 14	15	16
RESOLUTION	1024x768	1024x768	1152x870	1280x1024
Dot clock(MHz)	75.000	78.750	100	108
f h	56.476kHz	60.023kHz	68.681kHz	63.981kHz
A (us)	17.707 (1328dots)	16.66 (1312dots)	14.56 (1456dots)	15.63(1688 dots)
B (us)	1.1813 (136dots)	1.219(96 dots)	1.28 (128 dots)	1.037(112 dots)
C (us)	1.920 (144 dots)	2.235 (176dots)	1.44 (144 dots)	2.296(160 dots)
D (us)	13.653 (1024dots)	13.003 (1024dots)	11.52 (1152 dots)	11.852(1280 dots)
E (us)	0.320 (24 dots)	0.203 (16 dots)	0.32 (32 dots)	0.445(48 dots)
f v	70Hz (70.069)	75Hz (75.029)	75Hz (74.979)	60.020Hz
O (ms)	14.272 (806 lines)	13.328 (800lines)	13.333 (916 lines)	16.661(1066 lines)
P (ms)	0.106 (6 lines)	0.050 (3 lines)	0.044 (3 lines)	0.047(3 lines)
Q (ms)	0.513 (29 lines)	0.466 (28lines)	0.568 (39 lines)	0.594(38 lines)
R (ms)	13.599 (768 lines)	12.795 (768lines)	12.678 (870 lines)	16.005(1024 lines)
S (ms)	0.053 (3 line)	0.017 (1 line)	0.043 (4 lines)	0.015(1 lines)
SYNC. H/V	- / -	+ / +	- / -	+ / +
POLARITY				
SEP. SYNC	Y	Y	Y	Y

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV	
2002-05-06	TYPE : 180MT10P/00C BRAND : PHILIPS	8639 000 12344
NAME Robert Lin	SUPERS	36 590 — 23 10 A4
TY	CHECK	DATE 2002-05-06 Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 10 15:46

GENERAL PRODUCT SPECIFICATION

84 180MT10P LMT

Go to cover page

PHILIPS



MODE NO.	17			
RESOLUTION	1280x1024			
Dot clock(MHz)	135.000			
f h	79.976kHz			
A (us)	12.504 (1688dots)			
B (us)	1.067 (144 dots)			
C (us)	1.837 (248 dots)			
D (us)	9.481 (1280dots)			
E (us)	0.119 (16 dots)			
f v	75Hz (75.024)			
O (ms)	13.329 (1066 lines)			
P (ms)	0.038 (3 lines)			
Q (ms)	0.475 (38 lines)			
R (ms)	12.804 (1024 lines)			
S (ms)	0.012 (1 line)			
SYNC. H/V	+ / +			
POLARITY				
SEP. SYNC	Y			

All rights strictly reserved. Reproduction or issue
to third parties without written permission
without written authority from the proprietors.

CLASS NO.	18.1TFT SXGA LCD Monitor / TV	
2002-05-06	TYPE : 180MT10P/00C BRAND : PHILIPS	8639 000 12344
NAME Robert Lin	SUPERS	36 590 — 24 10 A4
TY	CHECK	DATE 2002-05-06 Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 10 15:46

GENERAL PRODUCT SPECIFICATION

180MT10P LMT 85

Go to cover page

PHILIPS



3.3.1.3 Horizontal scanning

Sync polarity : Positive or Negative
Scanning frequency : 30 - 80 KHz

3.3.1.4 Vertical scanning

Sync polarity : Positive or Negative
Scanning frequency : 56 - 75 Hz

3.3.2 TV Interface

Color system:
NTSC
PAL
SECAM

White point :

Normal(Natural) : $x=300 \pm 20$ $y=325 \pm 20$
Warm(Soft)
Cool(Rich)

SOUND POWER OUTPUTS:

- Stereo : 2 x 2.5 Watts,

SOUND CONTROLS:

- Volume
- Mute
- Treble
- Bass
- Balance
- Smart sound

- AVL :

- **SOUND MUTE** : When no video recognition on terrestrial tuner signal the sound must be muted.

CLASS NO.

18.1" TFT SXGA LCD Monitor/ TV

TYPE : 180MT10P/00C

BRAND : PHILIPS

8639 000 12344

NAME Robert Lin

SUPERS.

36

590

— 25

10

A4

TY

CHECK

DATE

2002-05-06

Property of

PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 1101 15424

GENERAL PRODUCT SPECIFICATION

86 180MT10P LMT

Go to cover page

PHILIPS



TELETEXT (For Europe, AP)

100 pages

BASIC : - TXT on/off

- Hold (Stop acquisition)

- Double height

- Reveal

- Subcode (Clock/time)

- Mix

- Cancel/recall

- Index

- Close Caption, V-chip (For Nafta)

- CC-1 .. CC-4 decoding and display

- TXT1..TXT4 Text mode

- No Extended Data Services (EDS)

- support violencrating and checking

- Automatic CC-1 selection at user mute

CLASS NO.

18.1" TFT SXGA LCD Monitor/ TV

TYPE : 180MT10P/00C

BRAND : PHILIPS

8639 000 12344

NAME Robert Lin

SUPERS.

36

590

— 26

10

A4

TY

CHECK

DATE

2002-05-06

Property of

PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

2006 1101 15424



Connections

SCART (Europe model only)

Specification : Full SCART according EN50049-1A3

- The sound output signal on the connector must be muted in case of no terrestrial video input.

Connector type : 21 pin black euro connector

ESD-protected : Yes

CINCH A/V, component input (Nafta and A only)

Location : Rear side

Spec. input : - CVBS: Source supplies DC coupled signals 1 Vpp, 75W.

- Audio: Impedance > 10 kW. The input will be overloaded when the signal > 1.5V rms.

- Audio levels:

- Nominal: 0.5V rms.

- maximum: 1.5V rms.

Connector type : - Cinch

ESD-protected : 15 kV

HEADPHONE

Option : Yes

Location : Side

Peripherals : Headphones with impedance between 8 - 600W

Features : - When headphone plug is connected, loudspeaker sound is muted.

- Volume control: with the loudspeaker volume.

Connector type : 3.5 mm stereo Jack, with switch

Specifications : - Output: 8 W < 4 mW

600 W < 4 mW

- Sound is the same as from the loudspeakers.

ESD-protected : 15 kV

S-video:

Location : Rear side

Input : 75W.

PC-stereo input

- Audio: Impedance > 10 kW. The input will be overloaded when the signal > 1.5V rms.

- Audio levels:

- Nominal: 0.5V rms.

- maximum: 1.5V rms.

CLASS NO.

18.1" TFT SXGA LCD Monitor / TV

TYPE : 180MT10P/00C

BRAND : PHILIPS

8639 000 12344

2002-05-06

NAME Robert Lin

SUPERVISOR

36

590

— 27

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

FORM 100-USA4N



3.4 Power input connection

Power cord length : 1.8 M

Power cord type : 3 leads power cord with protective earth plug.(NAFTA model)
Europe type power cord (Europe and AP model)

Power adapter: +12V +/- 1V 6000mA

3.5 Power management

PC mode

The power consumption and the status indication of the set with power management function are as follows,

STATUS	Horizontal On	Vertical Pulse	Power Spec Pulse	LED Pulse	as normal on	Green
Stand-by	No Pulse		Pulse	< 2 W	Flash	
Suspend	Pulse		No Pulse	< 2 W	Flash	
Power switch off	off	No Pulse	No Pulse	< 2 W	Flash	
Power switch off	-	-	< 1 W	Off		

TV mode

The power consumption and the status indication of the set with power management function are as follows,

STATUS	On	Power Spec	LED	as normal on	Green
Stand-by		< 2 W		Flash	
Power switch	off	< 1 W		Off	

3.6 Display identification

In accordance with DDC requirement DDC2B.

CLASS NO.

18.1" TFT SXGA LCD Monitor / TV

TYPE : 180MT10P/00C

BRAND : PHILIPS

8639 000 12344

2002-05-06

NAME Robert Lin

SUPERVISOR

36

590

— 28

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

FORM 100-USA4N



- 4.0 Visual characteristics
4.1 Test conditions

Unless otherwise specified, this specification is defined under the following conditions.

- (1) Input signal : As defined in 3.3.1.2, 1280 x 1024 non-interlaced mode (80 KHz), signal sources must have 75 ohm output impedance.

- (2) Luminance setting : controls to be set to 250 Nits with full screen 100 % duty cycle white signal.

- (3) Warm up: more than 30 minutes after power on with signal supplied.

- (4) Ambient light: 400 -- 600 lux.

- (5) Ambient temperature: 25 ± 2 °C

4.2 Resolution

Dot rate (MHz)	H.freq (KHz)	Mode	Resolution	V.freq (Hz)
25.175	31.469	IBM VGA	640 * 350	70.087
28.322	31.469	IBM VGA	720 * 400	70.087
25.175	31.469	IBM VGA	640 * 480	59.940
30.240	35.000	MACINTOSH	640 * 480	66.667
31.500	37.861	VESA	640 * 480	72.809
31.500	37.500	VESA	640 * 480	75.000
36.000	35.156	VESA	800 * 600	56.250
40.000	37.879	VESA	800 * 600	60.317
50.000	48.077	VESA	800 * 600	72.188
49.500	46.875	VESA	800 * 600	75.000
57.300	49.700	MACINTOSH	832 * 624	75.000
65.000	48.363	VESA	1024 * 768	60.004
75.000	56.476	VESA	1024 * 768	70.069
78.750	60.023	VESA	1024 * 768	75.029
100	68.681	MACINTOSH	1152 * 870	74.979
108	63.981	VESA	1280 * 1024	60.020
135	79.976	VESA	1280 * 1024	75.024

CLASS NO.

18.1" TFT SXGA LCD Monitor / TV
TYPE : 180MT10P/00C
BRAND : PHILIPS

8639 000 12344

NAME Robert Lin

SUPPLIES

36

590

— 29

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

DSR: 103 US424



- 4.3 Brightness: >250 nits at maximum contrast and Brightness.
(at center of the screen, Fig. 1)

- 4.4 Image size

- 4.4.1 Actual display size
359.0 x 287.2 mm

- 4.5 Brightness uniformity

Set contrast at 100% and turn the brightness to Max. (At original color)

Apply the Fig 1, it should comply with the following formula:

$$\frac{\text{Minimum luminance of five points (brightness)}}{\text{Maximum luminance of five points (brightness)}} > 75\%$$

- 4.6 PC White color adjustment

There are two factory preset white color 9300K and 6500K.

Apply full white pattern, with brightness in 100 % position and the contrast control at 50% position.
The 1931 CIE Chromaticity (color triangle) diagram (x,y) coordinate for the screen center should be:

9300K CIE coordinates X = 0.281 0.020
Y = 0.311 0.020

6500K CIE coordinates X = 0.312 0.020
Y = 0.338 0.020

CLASS NO.

18.1" TFT SXGA LCD Monitor / TV
TYPE : 180MT10P/00C
BRAND : PHILIPS

8639 000 12344

NAME Robert Lin

SUPPLIES

36

590

— 30

10

A4

TY

CHECK

DATE

2002-05-06

Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

DSR: 103 US424

PHILIPS



4.7 TV White color adjustment

There is one factory preset white color $x=300 \pm 20$ $y=325 \pm 20$ for TV RF signal.

Use FLUKE54200 color temp pattern, with TV smart setting set at natural (movies at Nafta) mode.

And color setting is normal.

Use The 1931 CIE Chromaticity (color triangle) diagram (x,y) coordinate for the screen center should be: $x=300 \pm 20$ $y=325 \pm 20$

4.8 TV picture centering.

Use CVBS input with cross hatch pattern to check the picture centering and should be

Left(size)-right(size) $< \pm 3$ mm.

Up(size)-down(size) $< \pm 3$ mm.

All rights strictly reserved. Reproduction or reuse to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.		18.1TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 31 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

FORM 100 (5/94)

PHILIPS



5.0 Mechanical characteristics

5.1 Controls

- Front Control :
- DC power switch
 - Power LED
 - PC/TV LED
 - PC/TV select key
 - TV/Video source select key
 - Up key
 - Down key
 - Left key
 - Right key
 - Enter key
 - PIP ON/OFF key
 - Auto adjust key

Rear I/O :

- PC D-sub signal cable
- DC 12V input
- Tuner input
- SCART input (Europe model)
- Cinch input (NAFTA and AP model)
- S-Video input
- RCA L,R audio input (audio input for S-Video)
- Mini jack PC audio input

Side I/O :

- Headphone output
- Line output

5.2 Unit dimension / Weight

Set dimension (incl. pedestal): 452 mm W X 452 mm H X 200 mm D

Net weight : : 6.3 Kg

5.3 Tilt and swivel base

tilt angle : 0 to 20 degree

5.4 Transportation packages

5.4.1 Shipping dimension/Weight

Carton dimension : 554 mm W X 544 mm D X 255 mm H

Gross weight : 9.3 Kg

CLASS NO.		18.1TFT SXGA LCD Monitor/ TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C			
		BRAND : PHILIPS			
NAME	Robert Lin	SUPERS	36	590	— 32 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

FORM 100 (5/94)



5.4.2 Block unit / Palletization (Air shipment)

<u>layers/block</u>	<u>sets/layer</u>	<u>sets/block unit</u>
5	4	20

6.0 Environmental characteristics

The following sections define the interference and susceptibility condition limits that might occur between external environment and the display device.

6.1 Susceptibility of display to external environment

Operating

- Temperature : 0 to 35 degree C
- Humidity : 20% to 80%
- Altitude : 0-3658m
- Air pressure : 600-1100 mBAR

Storage

- Temperature : -20 to 60 degree C
- Humidity : 95% max (< 40°C)
- Altitude : 0-12192m
- Air pressure : 300-1100 mBAR

Note: recommend at 0 to 35 C, Humidity less than 60 %

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C		BRAND : PHILIPS	
NAME	Robert Lin	SUPERS	36	590	33 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

DSM 100 US424



6.2 Transportation tests

Standard		Philips UAN-D1400	NSTA
Drop Test	Height	76 cm	76 cm
	Sequence	1 corner 3 faces (-10deg C x 16 hrs)	1 corner 3 edge (room temp) 6 fac
	Test Result	Electrical function ok Mechanical function ok No serious damage on set appearance (room temp/-10 c, humidity 70 %)	
Vibration Test	Sequence	(1) PACKAGING 5-200 Hz , 0.73 G , 30 min. for Each axis (2) OPERATING 10-50-10 Hz , 0.35 mm , 30 min. for Each axis	
	Test Result	Electrical function ok Mechanical function ok No serious damage on set appearance	
Bump Test		For design evaluation only Operating 10 G, 11 msec, 1000 cycles Temperature : 23 C Humidity : 60 % air pressure : 100 kpa (according to DSD draft standard UAN-D636)	

CLASS NO.		18.1TFT SXGA LCD Monitor / TV		8639 000 12344	
2002-05-06		TYPE : 180MT10P/00C		BRAND : PHILIPS	
NAME	Robert Lin	SUPERS	36	590	34 10 A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	

DSM 100 US424

- 6.3 Display disturbances from external environment
According to IEC 801-2 for ESD disturbances
- 7.0 Reliability
- 7.1 Mean Time Between Failures
System MTBF (Excluding the LCD panel and CCFL) : 50,000 hrs
CCFL MTBF : 50,000 hrs
- 8.0 Quality assurance requirements
- 8.1 Acceptance test
according to MIL-STD-105D Control II level
- AQL : 0.65 (major)
2.5 (minor)
(please also refer to annual quality agreement)
- 9.0 Serviceability
The serviceability of this monitor should fulfill the requirements which are prescribed in UAW-0346 and must be checked with the check list UAT-0361.

CLASS NO.

18.1" TFT SXGA LCD Monitor / TV
TYPE : 180MT10P/00C
BRAND : PHILIPS

8639 000 12344

2002-05-06

NAME Robert Lin

SUPERS

36

590

— 35

10

A4

TV

CHECK

DATE

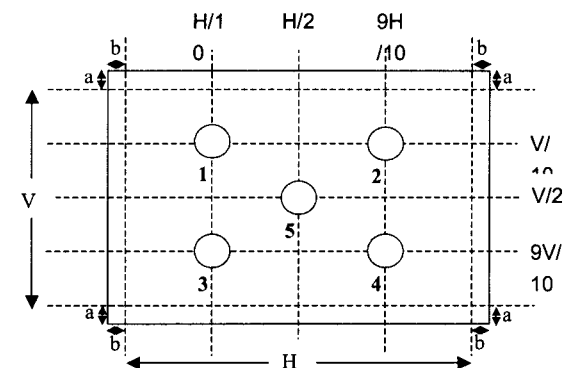
2002-05-06

Property of

PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

JUNE 100 05464

Fig 1: Brightness and Uniformity measurepoints



CLASS NO.

18.1" TFT SXGA LCD Monitor / TV
TYPE : 180MT10P/00C
BRAND : PHILIPS

8639 000 12344

2002-05-06

NAME Robert Lin

SUPERS

36

590

— 35

10

A4

TV

CHECK

DATE

2002-05-06

Property of

PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

JUNE 100 05464